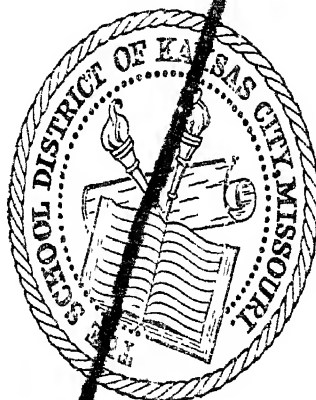


**THE TEXT IS
LIGHT IN
THE BOOK**

1929 35th

707 W52

Kansas City
Public Library



This Volume is for
REFERENCE USE ONLY

VOLUME XIII

NUMBER SIX

22-18
220

WESTERN ARTS ASSOCIATION BULLETIN

THIRTY-FIFTH ANNUAL REPORT

A RECORD OF THE
CONVENTION AT
CLEVELAND, OHIO,
APRIL 30, MAY 1-2-3,
1929



PUBLISHED AT
INDIANAPOLIS, INDIANA

Western Arts Association Bulletin

THIRTY-FIFTH ANNUAL REPORT AND YEAR BOOK

1929

REPORT OF THE CLEVELAND CONVENTION

Bulletins are published by the Western Arts Association on
February 25, March 20, April 15, May 1, July 15, October 15

HARRY E. WOOD, *Secretary*
5215 College Avenue
Indianapolis, Indiana

SUBSCRIPTION PRICE \$1.00 PER YEAR

Entered as Second-Class Matter March 11, 1928, at the Post Office at Indianapolis, Indiana, under the Act of August 24, 1912. Accepted for mailing at special rate of postage provided for in par. 4, Sec. 412, P. L. & R., Act of Feb. 28, 1925, authorized March 12, 1928.

COPYRIGHT, 1929
BY THE WESTERN ARTS ASSOCIATION

Reference

PRINTED IN THE UNITED STATES OF AMERICA

TABLE OF CONTENTS

	PAGE
Photographs of Officers, 1928-29.....	6
Officers and Standing Committees, 1928-29.....	7
Officers and Standing Committees, 1929-30.....	8
Program	9

GENERAL SESSIONS

Address of Welcome, R. G. Jones.....	16
President's Address—Development of the Individual Through the Creative Arts	18
Objectives of the Creative Arts in Our Schools, George E. Meyers.....	21
Why an Art Education, Vesper George.....	31
What Every Teacher of the Creative Arts Should Know, Augustus F. Rose.....	39
Measuring Men, Johnson O'Conner.....	45
Art—The Essential Factor, Charles Fabens Kelley.....	55
What Europe Is Doing in Graphic and Industrial Arts Today, Henry Turner Bailey.....	60

SECTION MEETINGS

Selling Art Education to the Community, James C. Bondreau....	75
Specific Values to Be Obtained From Some Definite Projects Properly Motivated, Harriet Estelle Hayden.....	77
Merchandising Color	82
Art Principles Applied to Everyday Life, Lucy Ward.....	87
Art Appreciation Developed Through Home Economics, Francis King Dooley	89
The Art of Attractive Personal Appearance, Ethelyn Bobenmeyer	92
Co-operative Industrial Education, H. W. Paine.....	95
Creative Opportunity in Manual Arts, M. J. Groschke.....	101
Aeronautics in the High School, S. H. Hurtuk.....	103
English and Printing, E. E. Sheldon.....	108

	PAGE
Printing—A Fine Art, Horace Carr.	111
New Problems for Manual Arts Teachers, Augustus F. Rose....	117
New Opportunity for Teaching Both Design and Construction in Shop Work, Charles A. Bennett.....	122
Is the Machine Displacing the Worker? If So, Where Does the Worker Go? Harry E. Blythe.	130
Keeping the Related Subjects Related, R. W. Selvidge....	139
Measurement of Executives, Johnson O'Connor.....	147
Art and the Man, Vesper George.....	159
Art and Printing, Charles Fabens Kelley.....	167
Correlation of Art and Printing in the Grades, David R. Winegarden.....	171
Do Industrial Arts Exploratory Courses Function as Guidance Factors? W. H. Stone.....	175
Arrangements of Instruction Material, R. W. Selvidge.....	182
Some Points in the History of Costume Applicable to the Present Day, Victoria Kloss.....	183
Training Appreciation in the Classroom, Mrs. Florence Williams Nicholas	194
Our Changing Taste, Jane Betsey Welling.	197

MISCELLANEOUS

Dinner and Dance.....	210
Advertisers	210
Exhibits	211
Business Session	212
Report of the Secretary.....	214
Report of the Treasurer.....	216
Report of Auditor.....	216

ADVERTISERS

American Crayon Company.....	15
Binney and Smith Company.....	209
Devoe & Raynolds Company.....	74
Eberhard Faber Pencil Company.....	121
Metal Crafts Supply Company.....	129
University Prints	59

Officers of the Western Arts Association 1929



MARY C. SCOVEL
President
Head Teacher Training Department
Chicago Art Institute
Chicago, Illinois



J. H. McCLOSKEY
Vice-President
Director of Technical Work
Lakewood Public Schools
Lakewood, Ohio



HARRY E. WOOD
Secretary-Treasurer
Director, Vocational Education and
Manual Training
5215 College Avenue
Indianapolis, Indiana



RUTH BLANKMEYER
Auditor
Director of Art
949 Lake Street
Oak Park, Illinois

Western Arts Association

Officers and Standing Committees, 1928-1929

OFFICERS

MARY C. SCOVEL, President
Head Teacher Training Department
Chicago Art Institute
Chicago, Illinois

HARRY E. WOOD, Secretary-Treasurer
Director, Vocational Education and
Manual Training
5215 College Avenue
Indianapolis, Indiana

J. H. McCLOSKEY, Vice-President
Director of Technical Work
Lakewood Public Schools
Lakewood, Ohio

RUTH BLANKMEYER, Auditor
Director of Art
949 Lake Street
Oak Park, Illinois

COUNCIL

WILLIAM H. VOGEL, Chairman
Director of Art
216 East Ninth Street
Cincinnati, Ohio

FRANK C. STANTON
Director of Manual Arts
130 High Street
Dayton, Ohio

HARRIET M. CANTRALL
Supervisor of Drawing
853 Grand Boulevard
Springfield, Illinois

MARY C. SCOVEL, Ex Officio

ELMER W. CHRISTY
Director of Industrial Arts
216 East Ninth Street
Cincinnati, Ohio

GEORGE S. DUTCH
Department of Fine Arts
George Peabody College for Teachers
Nashville, Tennessee

F. C. LAMPE
Barnhart Bros. & Spindler Co.
Monroe & Throop Streets
Chicago, Illinois

HARRY E. WOOD, Ex Officio

CHAIRMEN

ART SECTION
BELLE C. SCOFIELD
Assistant Art Supervisor
1644 North Talbot Avenue
Indianapolis, Indiana

HOME ECONOMICS SECTION
CHARLOTTE M. ULLRICH
Director of Household Arts
216 East Ninth Street
Cincinnati, Ohio

PRINTING SECTION
CHARLES B. MURPHY
Instructor of Printing
730 Cleveland Avenue
South Bend, Indiana

MANUAL TRAINING SECTION
ROY R. VAN DUZEE
Supervisor Industrial Arts
611 Sixty-ninth Avenue
West Allis, Wisconsin

VOCATIONAL EDUCATION SECTION
RAY F. KUNES
Principal Automotive Trades School
Madison Road and Erie Avenue
Cincinnati, Ohio

PROGRAM COMMITTEE
J. H. McCLOSKEY
Director of Technical Work
Lakewood Public Schools
Lakewood, Ohio

EXHIBIT COMMITTEE

OTTO E. EGE
Cleveland School of Art
Cleveland, Ohio

MARIE H. STEWART
Assistant Supervisor of Art
314 Graham Street
Indianapolis, Indiana

JOHN E. FINTZ
Dept. of Vocational Education
Cleveland, Ohio
W. HAROLD GOSSETT
Assistant Director of Vocational
Education and Manual Training
150 North Meridian Street
Indianapolis, Indiana

Western Arts Association

Officers and Standing Committees, 1929-1930



OFFICERS

J. H. McCLOSKEY, President Director of Technical Work Lakewood Public Schools Lakewood, Ohio	MYRTLE IRONS, Vice-President Supervisor of Art 331 Forest Avenue Rockford, Illinois
HARRY E. WOOD, Secretary-Treasurer Director, Vocational Education and Manual Training 5215 College Avenue Indianapolis, Indiana	EFFIE SCHUNEMAN, Auditor Professor of Art 2500 College Street Cedar Falls, Iowa



COUNCIL

ELMER W. CHRISTY, Chairman Director of Industrial Arts 216 East Ninth Street Cincinnati, Ohio	GEORGE S. DUTCH Department of Fine Arts, George Peabody College for Teachers Nashville, Tennessee
FRANK C. STANTON Director of Manual Arts 130 High Street Dayton, Ohio	MARY C. SCOVEL Head Teacher Training Department Chicago Art Institute Chicago, Illinois
HARRIET M. CANTRALL Supervisor of Drawing 853 Grand Boulevard Springfield, Illinois	EARL R. OPIE American Crayon Company 919 Jackson Extension Sandusky, Ohio
J. H. McCLOSKEY, Ex Officio	HARRY E. WOOD, Ex Officio



SECTION CHAIRMEN

ART JEAN CORSER Director of Art, Shaker Heights 2134 East 100th Street Cleveland, Ohio	MANUAL TRAINING W. B. JOHNSON Teacher of Industrial Arts 3400 Columbia Avenue Cincinnati, Ohio
HOME ECONOMICS HAZEL E. ROACH Supervisor Home Economics 234 North Davidson Street Grand Rapids, Michigan	VOCATIONAL EDUCATION ELMER W. CHRISTY Director of Industrial Arts 216 East Ninth Street Cincinnati, Ohio

PRINTING
RALPH POLK
Supervisor of Printing Instruction
Detroit, Michigan

PROGRAM
of the
THIRTY-FIFTH ANNUAL CONVENTION
of the
WESTERN ARTS ASSOCIATION
APRIL 30, MAY 1-2-3, 1929
Cleveland, Ohio

General Theme of the Convention:
***“Development of the Individual
Through the Creative Arts”***

OFFICIAL OPENING
TUESDAY MORNING, APRIL 30
EIGHT-THIRTY O'CLOCK

Opening of Registration Desk, Mezzanine Floor, Statler Hotel
Filing of Railroad Certificates

NINE O'CLOCK

Opening of material and equipment exhibits, Statler Hotel
Art exhibits, classified according to subjects, will be ready for study
on the Mezzanine Floor of the Statler Hotel
Visiting Schools. Complete visiting list and information regarding loca-
tion of schools at information desk, Mezzanine Floor, Statler Hotel

SECTION MEETINGS
TUESDAY AFTERNOON, APRIL 30
TWO O'CLOCK

ART

Belle C. Scofield, Chairman, Acting Director of Art, Indianap-
olis Public Schools

Topic: “Selling Art Education to the Community”
James Boudreau, Director School of Fine and Applied Arts, Pratt Institute,
Brooklyn, N. Y.

Discussion
Lillian Weyl, Director of Art, Public Schools, Kansas City, Missouri

Topic: "Specific Values to be Obtained from Some Definite Projects Properly Motivated"

Harriet Estelle Hayden, Director of Art, Public Schools,
Des Moines, Iowa

Discussion

Ethlyn Miller, John Herron Art Institute, Indianapolis, Indiana

Topic: "Merchandizing Color"

Henrietta Murdock, Consulting Decorator and Colorist, The
Upson Studio of Decoration and Color, Lockport, N. Y.

HOME ECONOMICS

Miss Charlotte M. Ullrich, Chairman, Director of Household
Arts, Cincinnati Public Schools

Topic: "Art Principles Applied to Everyday Life"

Lucy Ward, East Technical High School,
Cleveland, Ohio

Discussion

Lillian Bronson, Cincinnati, Ohio

Topic: "Art Appreciation as Developed by Home Economics"

Frances King Dolley, Western Reserve University,
Cleveland, Ohio

Discussion

Topic: "The Art of Attractive Personal Appearance"

Ethelyn Bobenmeyer, Longwood Commercial High School

Discussion

Helen Wagner, Des Moines, Iowa

TUESDAY AFTERNOON, APRIL 30

TWO O'CLOCK

MANUAL TRAINING

Roy R. Van Duzee, Chairman, Supervisor of Industrial Arts
West Allis, Wisconsin

Topic: "Cooperative Plan of Industrial Education"

Prof. H. W. Paine, Toledo University

Discussion

M. D. Jones, Principal Cleveland Trade School

Topic: "Creative Opportunity in Manual Arts"

M. J. Groschke, Director of Vocational Education, Erie, Pennsylvania

Discussion

Geo. C. Donson, Supervisor of Manual Arts, Washington, Pa.

Topic: "Shall Aeronautics Be Introduced as a Part of a High
School Industrial Arts Program?"

S. H. Hurtuk, Waite High School, Toledo, Ohio

Discussion

Earl L. Bedell, Supervisor Vocational Education, Detroit, Mich.

PRINTING

Chas. B. Murphy, Chairman, Printing Department of the
South Bend Vocational School, South Bend, Indiana

General Topic: Printing—Its Relationship to English and Design

Topic: "English and Printing"

E. E. Sheldon, Lakeside Press, Chicago, Illinois

Topic: "Applied Design for Printers"

Homer E. Sterling, Instructor of Sketching and Design,
Carnegie Institute of Technology, Pittsburgh, Pa.

Topic: Printing—A Fine Art

Mr. Horace Carr, Cleveland, Ohio

FOUR-THIRTY O'CLOCK

Tea—Women's City Club

Courtesy Cleveland Home Economics Association

TUESDAY EVENING, APRIL 30

SEVEN-THIRTY O'CLOCK

GENERAL SESSION

MUSIC—By the winner of the Ohio State Orchestra Contest

Call to order—H. L. Briggs, Chairman Local Committees

ADDRESS OF WELCOME—R. G. Jones, Superintendent of
Cleveland Schools

PRESIDENT'S ADDRESS—Mary C. Scovel, Head Teacher
Training Department, Chicago Art Institute

ADDRESS—"Objectives of the Creative Arts in Our Schools"

Dr. George E. Meyers, Professor of Vocational Education and
Guidance, University of Michigan

ADDRESS—"Why an Art Education"

Vesper George, Director of the Vesper George School of Art, Boston

WEDNESDAY MORNING, MAY 1

NINE-THIRTY O'CLOCK

SECTION MEETING

JOINT MEETING—Art and Manual Training
Belle C. Scofield, Roy R. Van Duzee, Chairmen

Topic: "New Problems for Manual Arts Teachers"

Augustus E. Rose, Director of Manual Arts, Providence, R. I.

Topic: "New Opportunity for Teaching both Design and Con-
struction in Shop Work"

Charles A. Bennett, Editor of the Industrial Magazine, Peoria, Ill.

General Discussion

WEDNESDAY NOON
LUNCHEON, WESTERN PRATT ALUMNI ASSOCIATION

WEDNESDAY AFTERNOON, MAY 1
ONE-THIRTY O'CLOCK

GENERAL SESSION

MUSIC—By Patrick Henry Jr. High School Band, three times' winner of the Class C Championship of Ohio, under the direction of Ralph Rush.

ADDRESS—"What Every Teacher of the Creative Art Should Know"

Augustus E. Rose, Director of Manual Arts,
Providence, Rhode Island

ADDRESS—"Radiant Energy and Vitamins—a Basis for the Creative Arts and for Life"

Weston A. Price, Specialist in researches on the relation of radiant energy to vital phenomena, Cleveland, Ohio

WEDNESDAY AFTERNOON
FOUR O'CLOCK

Trip to Art School, Art Museum and Nela Park
(The University of Light)

Dinner at Nela Park

EIGHT O'CLOCK

Attend the Play House or Little Theatre

THURSDAY MORNING, MAY 2
NINE-THIRTY O'CLOCK

SECTION MEETINGS

VOCATIONAL EDUCATION

Ray F. Kuns, Chairman, Principal of Automotive Trades School,
Cincinnati, Ohio

Topic: "Is the Machine Displacing the Worker? If So—Where Does the Worker Go?"

Harry E. Blythe, Assistant to President, Goodyear Tire and Rubber Co., Akron, Ohio

Topic: "Keeping the Related Subjects Related"

R. W. Selvidge, Professor Industrial Education
University of Missouri

Topic: "Measurement of Executives"

Dr. Johnson O'Connor, General Electric Company, Lynn, Mass.

THURSDAY MORNING, MAY 2
NINE-THIRTY O'CLOCK

JOINT MEETING—Art and Printing

Miss Scofield and Mr. Murphy, Joint Chairmen

Topic: "Art and the Man"

Vesper George, Director of the Vesper George School of Art, Boston

Topic: "Art and Printing"

Charles Fabens Kelly, Assistant Director of the Art Institute,
Chicago, Illinois

Topic: "Correlation of Art and Printing in the Grades"

David R. Winegarden, Printing Instructor, Indianapolis Public Schools

THURSDAY NOON
LUNCHEON, ART INSTITUTE OF CHICAGO
LUNCHEON, BRADLEY POLYTECHNIC INSTITUTE

THURSDAY AFTERNOON, MAY 2
TWO O'CLOCK

GENERAL SESSION

MUSIC—By the West High School Orchestra, Cleveland, Ohio.
Under the direction of Glen Montgomery.

ADDRESS—"Measuring Men"

Dr. Johnson O'Conner, General Electric Co., Lynn, Mass.

ADDRESS—"Art—The Essential Factor"

Charles Fabens Kelly, Assistant Director of the Art Institute,
Chicago, Illinois

THURSDAY EVENING
SIX O'CLOCK

BANQUET BALL PARISIENNE "A Night in Paris"

FRIDAY MORNING, MAY 3
NINE-THIRTY O'CLOCK

SECTION MEETING

JOINT MEETING—"Manual Training and Vocational Education"—North Foyer

Messrs. Van Duzee and Kuns, Chairmen

Topic: "Do Exploratory Courses Actually Function as Guidance Factors?"

W. H. Stone, Director of Guidance, West Allis High School
West Allis, Wis.

Topic: "Mechanical Drawing"

A. B. Babbitt, The Kent Machine Co., Cuyahoga Falls, Ohio

Discussion

J. F. Faber, Academy High School, Erie, Pa.

Topic: "Arrangement of Instruction Material"

R. W. Selvidge, Prof. Industrial Education, University of Missouri,
Columbia, Mo.

FRIDAY MORNING, MAY 3

NINE-THIRTY O'CLOCK

JOINT MEETING—Art and Home Economics

Misses Scofield and Ullrich, Chairmen

Topic: "Some Points in the History of Costumes, Applicable to the Present Day"

Victoria Kloss, Hiram College, Hiram, Ohio

Topic: "Training Appreciation in the Class Room"

Mrs. Florence Williams Nicholas, Richmond, Ind.

Topic: "Our Changing Taste"

Betsy J. Welling, Detroit Teachers' College, Detroit, Michigan.

FRIDAY AFTERNOON

TWO O'CLOCK

GENERAL SESSION

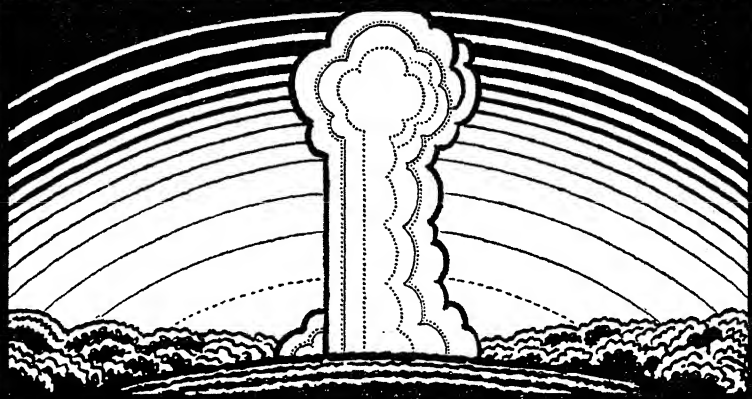
MUSIC—By the John Adams High School Orchestra, Cleveland, Ohio. Under the direction of Amos Wesler

ADDRESS—"What Europe Is Doing in Graphic and Industrial Arts Today" Illustrated by Lantern Slides

Henry Turner Bailey, Director of the Cleveland School of Art

AWARDING OF PRIZES—By Material and Equipment Exhibitors

BUSINESS MEETING



Live, helpful ideas and the services of the manufacturer are an inseparable part of the qual- ity of "Old Faithful" materials

** Write for our Art Helps on the use of these
"Old Faithful" Materials:*

"Crayonex" Wax Crayons
"Crayograph" Pressed Crayons
"Milo" Plastic Modeling Material
"Holdtu" Paste
"510 Series" Colored Chalk
"Prang" Charcoal Pencils
"Prang" Tempera
"Prang" Water Colors

(All Made by The American Crayon Company)

They will prove of invaluable assistance in your art work

THE AMERICAN  **CRAYON COMPANY**
HOME OFFICE AND FACTORIES 735-835 HAYES AVE., SANDUSKY, OHIO
NEW YORK OFFICE: 130 WEST FORTY-SECOND STREET
SAN FRANCISCO: 116 NEW MONTGOMERY STREET
DALLAS, TEXAS: SANTA FE BUILDING

LEADERSHIP SINCE 1835 · 94 YEARS OF FAITHFUL SERVICE

Address of Welcome

R. G. JONES

Superintendent of Cleveland Public Schools

IT becomes my duty, I am told, to welcome you here. I am going to add to that the word "pleasure." We have occasion, since we have had our big hall here, to welcome a great many conventions, but I know of none which it gives me more pleasure to welcome than a group of artists and those interested in art.

It seems to me that in all education we are today engaged essentially in a sorting process. We are sorting not only in the arts, but in all other divisions. Possibly at no time during my conscious years has there been such a bidding in every walk of life for talent and such a search for its discovery. I was speaking the other day to a gentleman, who is the dean of one of the best schools of education in this country. In the course of conversation I asked him how many great psychologists there are in the United States.

"Well," he said, "you could probably number them all on the fingers of one hand."

"Are all of them great?" I questioned.

"Well, if you were to pick one of them, I don't know which you would want to pick for the greatest," he announced.

Not long ago a manufacturer came into the office of the Dean of Western Reserve University and asked, "Where is that young fellow, X, who was with you awhile ago?"

"He is working in such and such a concern," was the reply.

"I want to hire him," announced the manufacturer.

"Well," replied the Dean, "he is perfectly happy there and he is going to stay, I am sure, with that company."

"No, he is not. I am going to have that man. I don't care what he costs."

Not long afterwards the Dean remarked that he had been asked virtually the same questions by another man, and almost the same rejoinder as before was made. "I propose to have that man no matter what he costs."

That means that with all the sorting we have had so far we haven't found enough talent.

Now, in contrast to that, you know that recent doleful note sounded at Columbia University, by Dr. Pitkin, I refer to that interesting book, "The Twilight of the American Mind," which you may be attracted to read, he shows the process by which we are assorting mentalities—intelligences, or learning rates, or whatever this thing is that we attempt to measure by achievement tests—and predicts that in 1975 there will not be enough jobs in this country

to supply the bright minds. I haven't the slightest idea in the world that he is correct.

I believe the first picture I have sketched to you is the true one. A while ago somebody predicted that the market would become saturated with automobiles. They figured a limit of one car for each family. Well, we have discovered that one car is not the family limit.

In the same breath, from the vantage point which I occupy as the manager of an institution, I would predict that there will be more art and better art in 1975; there will be more positions in art and there will be more highly selected persons in art than we dream of at this time.

I sincerely hope that you folks will feel inspired to go on and fill this market and aid in selection in this division of work which is given to human kind in this country to do. Think how hungry the country is for it! We sit patiently while all kinds of advertising is talked to us over the radio in order that we may not miss the song artists. We read and observe all the printed advertisements in order to get color and line and design. There is a real hunger for art. Very likely the money is coming out of the commercial end of art just at present, but at the rate money is being made in this country right now it will not be long until there will be sufficient means and sufficient inclination and desire on the part of the people to buy art, not for the sake of some material end to be served by it, but art for the thing itself.

We are coming into more money than any nation on the face of the earth ever possessed. If we do not find some wise and fine outlets for the use of this money it will find an outlet in unworthy things. And so there is a duty to your country, as well as a pleasure to yourselves, in the performance of great work in which you are interested.

Art is simply, to me as a layman, the spirit to the body. We have multiplied mechanics in this country and we couldn't live with them if it weren't for the art. It is only as we decorate our machines and beautify them and adapt them to ourselves and our minds and our spirits that it becomes possible to live in this country. So we welcome you here to the aid of this great cause which you are representing and attempting to develop, and we gain from this contact with one another in our joint effort. I thank you.

Development of the Individual Through the Creative Arts

MARY C. SCOVEL

Head Teacher Training Department
Art Institute
Chicago, Ill.

MEMBERS of the Western Arts Association!

For a few moments let us consider some of the new phases of Art Education—the discovery of the Individual, and his development through the study of Creative Arts.

The necessary thing in Education and Life used to be the “getting of knowledge,” for knowledge was power. “The human individual needs discipline, needs to recognize his own failures, needs to learn the lessons of obedience, and above all needs knowledge,” but how much more important that thought be given to develop the individual into an efficient and successful human being, lovable in thought, gracious in character, affable toward others and appreciative of all beauty about him.

What a marked change this “Speeding Age” has brought us! Education in this year of 1929 is a practical procedure. Teaching today is full of pleasure, anticipation and practical results, *because* “clear down the line” it has become a profession. A fine professionalism marks the spirit of the work. There is enthusiasm and a high standard not surpassed in any profession. Whether in the small specialized classes or in annual conventions, there is manifest the *new professional consciousness*.

Ask yourself this question: Why am I attending the Western Arts convention today—if not to raise my professional efficiency?

And where is this professional consciousness and our high standard going to lead us? They are preparing us to discover and develop the individual. By what process? The study of individual differences through the organization and practical development of the studies of “The Arts” as Design, Appreciative Arts, Manual Training, Household Economics, Vocational Education, Printing, and so on.

Education has changed from the teaching of subject matter to the study of the individual, to the child in all his *human relationships*. Says an important educator: “American education is for all of the people, no matter how many millions of them, and for each of the people individually, no matter how many millions there are of the individuals.”

Perhaps you remember that last year at the Superintendent’s Meeting of the N. E. A. in Boston, an important matter was discussed, to the effect that education in our American schools be less of

books and memory work; that more attention be given to the student interests and individual development in every day activities.

The teacher *should* be interested in the individual student, and he in turn *is* interested in all that is going on about him. He is involved, and keenly so, in *life itself*. Why should not the teacher lead him to enjoy life in its fullest measure? To so approach his work that success will be inevitable.

And this is where we *Art* teachers excel—by *Art* teachers I include the instructors of “The Arts.” There are positions in which book learning is a necessity, but how many more opportunities come to those who have a practical, creative art education! The matter need not be discussed here, you know the situation so well. How many a boy or girl has taken courage and learned the happiness of accomplishment with his hands through the study of Art, Manual Training, Household Economics, Printing and Vocational Education!

But is there one outline for art lessons—one type of work for Manual Training; one set of Household Arts lessons; one course in Vocational Education? This seems almost too simple to even mention. Are all boys of one type, are all girls interested in the same thing? Certainly not! The Art Instructor must be keen and alert, for individual differences and abilities have to be considered. Each student is human and must be analyzed as such and placed in his proper sphere of interest, activity and accomplishment. And this is just what you teachers sitting before me are contemplating in your classroom problems.

What interests this boy who is quick and alert—the aeroplane; what this one who is slow and plodding—the building trades—the automobile? What holds the attention of this girl—painting, design, art needlework, interior decoration, or costume?

As a result of differences, students necessarily must be placed in their respective groups. Fortunately these groups are not as large as formerly, and therefore the instructor can produce more creative, skilled workmen, and the Art teacher more accomplished designers—thus meeting the practical needs of this creative age.

The discovering of the individual is the first important step, and designates the student to his proper class. The development of his individuality is the second process, and most fascinating to a real teacher. While in Cleveland it will interest you to see how perfectly this method has been worked out in the schools. You, as the art teacher, know what is being done in your own town for the efficiency of the individual student.

All over this country is spreading a new idea in Education—in Art Education. The “New Education,” some call it, others the “Progressive Education.” It matters little what name it carries, the idea is the same. The governing idea is the personality of the student

plus his abilities—the development of this personality and these abilities into an independent, creative being who has a keen observation and love of Art, and the power to meet situations in real life—be that child life or advanced student life. I grant you this new procedure means much more knowledge of psychology and humanity, and greater study and observation on the part of the instructor. It means more to be an art leader than an art lecturer.

Every one in this audience has had a similar experience in developing an Art Subject—where the student himself was given the initiative. What was the result?

1. A keen interest in investigation for knowledge of the subject assigned, and *necessity of research work*.
2. Cooperation of the entire group in assigning and working out the problem, the students allotting the tasks to each other.
3. A high powered activity in accomplishment—no laziness or attitude of seeming indifference.
4. Great responsibility for individual work assigned.
5. Creative self-expression—or individual development—at the student's highest level of attainment.

Assuming that the art problems presented to the student are alive to *his* interests, does it not pay, *teachers*, to be a leader, not a lecturer?

After listening to the various discussions in the Round Tables at this convention; to the inspirational speakers on the general programs, you will return to your work with the ideas of the "New Art Education" influencing your procedure for next year.

Instead of presenting your pupils with a bewildering complexity of facts, you will centralize and unify your plans. You will see that your pupils have contact with things, with persons, with industry, with business, with movements of life—and thus life itself.

The young people will use their eyes, their hands, their brains—not yours. Their individuality will be developed by life contacts; their creative ability will grow by working with and evaluating themselves with others; their cooperation, so necessary in a successful and happy life, will grow and expand; their appreciation of industry and the beauty of all about them will become more vital.

The spirit of this age is ruled by invention. This is a creative age, governed by the speed of the aeroplane. Everything that was modern yesterday has suddenly become ancient and speed has brought us overnight into ultra modern and advancing methods and ideas. Therefore no young person is going to take your "say so." He must create for himself. Your part as teachers of "The Arts" is to discover his interests; see that he approaches his problems with enthusiasm and skill, and lead him to express his individuality with appreciation and success.

This new curriculum, mentioned a moment ago, has developed and greatly changed the study of "The Arts." Are you using the same

procedure today that you tried five—ten years ago? Did you then succeed in obtaining the same techniques and skills you attain today?

It may be said that students today do not have the factual knowledge of a few years back. Yes! But what dynamic forces take the place of these facts—a keenly interested, vital personality; a creative individual who attacks life's problems with courage, constructive power, and appreciation. And, art teachers, you furnish the inspiration for this individuality.

If "The Arts" are to have any influence and weight in American education, a practical approach must be made to suit each individual. Take an aeroplane view of the situation. Look all about you. See Art Education in its usefulness as well at its beauty. Usefulness in developing happiness, interest, skill, creative power, appreciation and success in each individual. This is the great problem before each one of us as professional teachers of "The Arts."



Objectives of the Creative Arts in Our Schools

DR. GEORGE E. MEYERS

Professor of Vocational Education and Guidance
University of Michigan

LAST winter a football game in California attracted nationwide attention. The contesting teams were from Georgia Tech and the University of California. The former team had won the championship of the south; the latter, of the west coast. As the game proceeded, it was evident that the teams were very evenly matched. A lucky break might bring victory to either side. In an exciting moment the ball was fumbled by a Georgia Tech player. Instantly an alert California man fell on it and almost as quickly was again on his feet with the ball under his arm. Every one thought the lucky break had come and that the fates were favoring the western team. But to the utter astonishment of his fellow players and the 70,000 spectators, the man who recovered the ball started to run towards the wrong goal. Seventy yards down the field he ran, spurred on by the consciousness that he was making a spectacular play, before he was brought to earth by a member of his own team. He had carried the ball nearly three-fourths the length of the field and brought it within a yard of the goal line he was supposed to defend. That spectacular run cost California the game.

The trouble with the California player was that he became confused as to his objective. His technique in recovering the ball, in get-

ting to his feet, in running down the field was fine. His effort was highly commendable. But he went in the wrong direction, because, for the moment, he had the wrong goal, the wrong objective in mind.

The objectives or goals of education are far more complicated, far more difficult to keep clearly in mind than is the goal of the football player. And the methods of working towards these objectives are often confusing. We laugh at the football player when he runs in the wrong direction. It is much easier and a much more frequent occurrence for a teacher without knowing it, not only to run in the wrong direction, but to run around in circles, getting nowhere. And I may add, this is sometimes done with fairly good technique. It is eminently fitting, therefore, that we who are engaged in the task of educating children and youth should ask ourselves from time to time just what our objectives are, what we are doing to attain these objectives and how successful we are in attaining them. And so I am asking your patient attention for a time this evening while I attempt to bring out into clearer view just what we are driving at in our creative arts work in the elementary grades, the junior high school and the senior high school.

I. Objectives in the first six grades.

In general terms the objectives of creative arts in the first six grades should be the same as the objectives of all other work in these grades: namely,

"To give all children common tools with which to work and, by means of common knowledge and experiences, to develop in them fundamental habits, ideals, attitudes and appreciations that will be useful to them as citizens and consumers;" *not as men in contrast with women, not as carpenters in contrast with doctors or teachers, but as citizens and consumers, as Bonser has so well expressed it. Elementary education, including of course, the work in creative arts which is given in the elementary grades, deals with those things which are the common need of all without regard to sex or future occupation. It is concerned with the things that unify or integrate people rather than with those that differentiate between them.

But, some one asks, what about individual differences? Would you ignore these in elementary education? Are we to forget that Mary draws remarkably well and shows a keen sense of color harmony, while James draws wretchedly and combines his colors in a manner that is literally shocking? Are we to be oblivious of the fact that William shows unusual ability in constructive work, while Jane seems positively stupid in the same work?

Yes, as far as our objectives are concerned, we are to forget individual differences in the elementary grades. It is our business to do the same thing for all, as far as this is humanly possible,—prepare

them for successful performance of their duties as citizens and consumers. No, emphatically no, as far as class organization and methods of teaching are concerned. In the elementary grades, individual differences demand, not that we try to do different things for differing boys and girls, but that we try to do the same thing in different ways. If you examine the Dalton Plan, the Winnetka Plan, or any other of the many plans for improving elementary school work which are based upon greater recognition of individual differences, you will find that these deal with methods rather than with objectives.

The function of the elementary school, then, including the creative arts work taught in its grades, clearly is to furnish to all its pupils the elements of what, for want of a better term is called general education.

But this needs some analysis. In what way or ways does a subject taught for general education purposes contribute to the preparation of the individual for his duties as citizen and consumer? To put the question more directly, how does your work in the creative arts field help your boys and girls to become better citizens and consumers? Or, as our psychological friends would put it, what carries over from your subject whose objective is general education into the life of the adult as citizen and consumer? Probably many of you are familiar with the answer of the psychologists to this question. But this answer is so fundamental to any adequate consideration of the objectives of our school work in the creative arts that it must be called to mind, even at the risk of boring some of you.

The psychologists tell us that the study of a subject may contribute to one's education in any one or all of the following ways:

1. It may provide him with *elements* of experience which he will encounter again and again in later life. Grammar, spelling, and arithmetic are rich in elements that are common to one's later experiences.

2. It may develop *methods of procedure* that can be applied to advantage in one's later experiences. For example, the methods of procedure developed in solving a problem in algebra or in proving a proposition in geometry are very similar to those that may be required later in handling a business situation.

3. It may result in the formation of certain *habits*, the acceptance of certain *ideals*, and the establishment of certain *attitudes of mind* that will function in later life. Community civics does this most decidedly if properly taught.

4. It may provide one with *appreciations* that he will use frequently in later experiences. Art and music are especially rich in this respect.

It is clear that any subject is not equally rich in all four respects and that all subjects are not equally rich in any one respect.

If it were possible to evaluate these contributions, saying for example, that number one is worth 30 per cent, number two is worth 20 per cent, number three is worth 35 per cent, and number four is worth 15 per cent; and if it were possible to say just how effective a given subject is, or may be, in producing numbers one, two, three, and four, then we should have an easily usable means of comparing industrial arts with arithmetic, household arts with grammar, and so on. But the contribution made by any subject depends upon what content of the subject is emphasized, what is passed over lightly, and what is omitted altogether.

It depends, also, upon how the subject is taught, the extent to which the mind of the teacher and the mind of the learner are enrapport, and upon the capacity, interests, and background of previous experience possessed by the learner.

The best efforts of our psychologists, therefore, have not yet made it possible to compare the values of two subjects in a statistically accurate manner. Nevertheless, in what has been presented above, they have furnished us the means of making this comparison in general terms and of forming a fairly reliable judgment as to the values of any given subject.

Let us, then, examine the creative arts as taught in the elementary grades with a view to ascertaining the richness of its contribution in the four respects presented above, in order that we may bring more clearly to mind the objectives of our work.

Our first question: Is the creative arts work of the elementary grades rich in elements which the boy and girl will encounter in the later experiences of life? It is immediately obvious that the answer depends upon what is included in the creative arts courses. When algebra, geometry, physics, or United States history is mentioned as a high school subject or arithmetic or grammar as an elementary subject, one thinks at once of a fairly definite body of subject matter which is the same wherever taught. Creative arts work in the elementary grades is not so well standardized as these older subjects. The course of study in one school may differ greatly from that in another school. For example, if the course consists, as did the one which I took more than forty years ago, wholly of reproducing on one page of the book a drawing given on the opposite page, we shall have to admit that it does not contain very many elements that the average boy or girl will encounter in later life. If, on the other hand, the course includes industrial and household arts as well as drawing and design and is closely correlated with literature, history and nature study, illustrating here the days when knighthood was in flower and there the times of John Alden, we see at once that we have a body of subject matter rich in elements of knowledge of materials, of processes, and of principles of spacing, form, and color that make up the ex-

periences of the average individual. In fact, we are safe in challenging our academic friends to name any other subject offered in the elementary school that is richer in elements common to one's later experiences than a well-planned creative arts course, assuming that both are taught equally well.

Our second question: Is creative arts work a good means of developing methods of procedure that will be useful in attacking the problems of later life? The value of any subject in this respects depends upon how it is taught. Probably the best method of teaching yet devised for accomplishing this important purpose is the project method. The business of adult life is to carry through one project after another. Therefore school work well conducted by the project method should develop a procedure that will carry over to a very large extent into the later experiences of life. But some subjects lend themselves better than others to the project method of teaching. And no subject of the elementary school curriculum is better adapted by the nature of its subject matter to this method than is creative arts work. Not only may its subject matter easily be organized and taught as a series of projects, but also the projects have a definiteness, a reality, and an inherent interest about them that are hard to equal in the projects of other subjects. It would seem, therefore, that we are justified in claiming for creative arts, when well taught, important values as a means of developing useful methods of procedure.

Our third question: What sort of contribution do the creative arts courses make towards the formation of desirable habits, the acceptance of worthy ideals, and the establishment of wholesome attitudes of mind? Giving a satisfactory answer to this question in a brief paper like this is a big contract. Here again the contribution made by any subject differs enormously in the hands of different teachers. In other words it depends upon how the subject is taught. The best we can do is to determine, if possible, whether the creative arts subjects afford good opportunities for the formation of desirable habits, the acceptance of worthy ideals, and the establishment of wholesome attitudes of mind. Organized as definite, interesting, and real projects, this work cannot help being rich in opportunities for developing the very habits, ideals, and attitudes that will be useful in projects of adult life. In the creative arts careless, inaccurate, dishonest work is likely to stare the pupil in the face in the form of a completed project which is obviously ugly or out of proportion or will not work. He finds that in order to make things go in a manner that gives him satisfaction a reasonable degree of care and accuracy is necessary. He cannot help seeing, both in his own work and in that of his fellows, that persistence counts. Class or group projects bring home to him the ideal of cooperation and give

him a chance to acquire the habit of working with others on a common undertaking. And work in at least some of the creative arts courses should give every boy and girl who engage in it a wholesome attitude toward labor and those who earn their living by work with their hands.

Our fourth and last question: Does the creative arts work of the elementary school provide the pupil with appreciations that will function extensively in his later life? This question is concerned primarily with the individual as a consumer or user of the products or service of others. It is a question of the extent to which in creative arts courses pupils acquire appreciation of good design in houses and furniture and other articles of daily use, of color harmony, of good materials, of workmanlike construction, and of the amount of work and skill involved in various kinds of jobs well done. All will grant that these appreciations are worth while in the life of any individual. But how successful are the creative arts courses in developing them? So many factors are involved that it is difficult even to estimate. Doubtless many teachers never have thought of the cultivation of these appreciations as an important objective of their work. Yet, whether it is consciously striven for or not, some contribution of this character must result from a creative arts course that is taught even fairly well. Certainly the subject in the hands of a high grade teacher offers possibilities of a far richer contribution to the pupils' appreciations than generally results.

We find, then, the creative arts are rich in their possible contribution to the lives of pupils in providing elements which they will encounter in their later experiences, in developing methods of procedure that will help them solve future problems, in building up habits, ideals, and attitudes of mind that will increase their usefulness to themselves and to society, and in cultivating worth while appreciations. A careful comparison of the creative arts courses with other subjects of the elementary school curriculum in these respects is impossible in this brief paper. There is neither time nor space to examine even one other subject as the creative arts have been examined above, though it is probable that few if any subjects would make a better showing. But, after all, is such a comparison necessary in order to justify us in conceding to the creative arts a place of very great importance in the realization of what we have called the general education objective of the elementary school?

II. *Objectives in the junior high school.*

With completion of the elementary school period at the end of the sixth grade come new educational needs. It no longer suffices for the school to deal only with those things which are the common need of all, men and women, unskilled worker and professional man alike. Integrating education must continue, to be sure, and the

general education objective must still be recognized as important; but a new objective now claims attention, also. This new objective is *exploration* of individual interests, aptitudes and limitations. In the junior high school we are interested, not only in making better citizens and consumers, but also in aiding each pupil to discover suitable fields for his future activities educational, vocational and avocational. Previous to this point in the work of our schools individual differences have claimed attention only in connection with the machinery and methods of education; now they become fundamental in the framing of the objectives of education.

There is, of course, abundant authority for thus emphasizing the exploratory objective of the junior high school. Koos, in discussing this subject, points out that the function of exploration for guidance is a corollary to the function of recognition of individual differences. He maintains that, since differences among pupils are of sufficient importance to be recognized, provision should be made for the discovery of these differences.

Briggs includes in his list of five things which the junior high school should attempt: "To explore, by means of material in itself worth while, the interests, aptitudes and capacities of pupils." He says further: "This purpose is based on a recognition of insuperable differences that become of increasing importance as pupils approach the age of leaving school. . . . The intermediate school courses should explore the interests, aptitudes, and capacities of pupils in all of the more important fields of learning, which include industrial activities."

Davis states the case even more emphatically: "Of all the functions of the junior high school, that which seeks to aid pupils in discovering their own capacities and limitations, interests and distastes, powers and weaknesses, is in the judgment of the writer, the most important. It is this function above all others that justifies the reorganization of schools on a new basis."

These writers have in mind the work of the junior high school as a whole. If the exploratory function of junior high school work as a whole is important, how much more so is the exploratory function of the creative arts courses. In fact, in some city school systems certain of these courses are definitely labeled try-out or exploratory. Here, in art and design, in mechanical drawing, in the varied work of a general shop or of a series of specialized shops are wonderful opportunities for boys and girls to discover interests and aptitudes, and limitations too, which have great significance in relation to their choice of occupation, to their educational plans for the coming years and to their use of leisure hours in adult life.

Far too few of our teachers and supervisors in the creative arts have caught the vision that should always go with a clear conception of the exploratory objective of their work. Many of them do lip

service to this objective, but their thinking and teaching are wholly in terms of the general education objective. It is a worthy service, to be sure, to aid boys and girls to become good citizens and consumers. But how much more fascinating and stimulating the daily work becomes if in addition to this service one is consciously planning and carrying on that work in such a way as to aid these same boys and girls to find themselves and to so plan their lives that they will realize their largest personal possibilities and render their greatest possible service to society.

There is not time to discuss at length this evening the effects which a clear conception and vigorous application of the exploratory function would have upon the creative arts work of the junior high school. Certain it is, however, that in many places important changes in courses of study would take place and equally important changes in methods of teaching. Many teachers and supervisors would acquaint themselves much more fully with the applications which the content of their courses have in industry and business. More of the problems and projects of the class room would be brought in from the commercial shop and business establishment. More often, too, would classes and individual pupils find their way into the places where the subject they are pursuing in the school has its applications on an economic basis. And it is to be hoped that teachers would much more often supplement the exploratory values of their work with reliable, significant and adequate information about the requirements and opportunities of the occupations most closely related to the work of the course.

III. *Objectives in the senior high school.*

First, let us ask ourselves what happens to the general education and explanatory objectives of the creative arts as we pass from the junior to senior high school? It is generally agreed that both of these objectives persist. We are still concerned with making better citizens and consumers and with testing the capabilities and limitations of our pupils. In case of some who take our courses, for example, those who are going on through college and into the legal or medical profession, the first of these objectives is dominant. In case of others, especially those who are still uncertain concerning their future vocation, the exploratory objective is more important.

But a third objective now rises into prominence in creative arts work to share honors with these two if not dominate them—the vocational preparatory objective. We know that the majority of those who enter senior high school do not continue their education in a higher institution. In fact, many of them do not complete the high school course. In one of our large cities the tenth grade enrollment last year was 10,386, the twelfth grade enrollment, 4,374, and the number graduating from the senior high school only 3,602;

36 per cent as many graduates as students in the tenth grade. Public education is recognizing today large numbers of boys and girls who drop out in making definite preparation for their vocations. It is the creative arts subjects which are called upon to carry the burden of this preparation; and this burden seems sure to be heavier ten years hence than it is today. Hence the significance of the vocational preparatory objective in the senior high school work of our field.

If this third objective is to be realized, our teachers of art and design must accept, as few of them have accepted thus far, responsibility for training in commercial art, interior decorating, textile design, and other similar lines. The teacher of mechanical drawing must prepare larger numbers for work in drafting rooms and architects' offices. And the various shop teachers will find it necessary to go much farther than they have yet gone in training boys for the skilled trades and the minor technical jobs of industry.

Here our problem is to bring into the lives of our pupils those elements of experience which will be encountered later in the occupations for which they are preparing; those methods of procedure that are fundamental in these same occupations; those habits, ideals and attitudes and those appreciations which are essential to success in these occupations. This is just another way of saying that for certain students the general education objective has now become specific, centered upon the responsibilities of a particular occupation instead of upon those of a citizen and consumer. This challenges again our best thought on content and organization of courses of study, on equipment, and on methods of teaching. It demands an intimate knowledge of what workers in these occupations do and how they do it. It calls for frequent contacts between the teacher and those who are engaged in the occupation for which he is giving preparation.

No doubt some of you are thinking that it is impossible to recognize and work towards these three objectives—general education, vocational exploration, and vocational preparation—in the creative arts work of the same high school. Perhaps you are ready to insist that the last named objective requires a different set up and a different kind of teacher than the others. There is not time to discuss this point at length; but I must remind you that, however desirable it may be for a special set up and special teacher to be provided for vocational preparatory courses, such an arrangement is wholly out of the question in much of the creative arts work of most senior high schools. This is especially true in the art and design department and the mechanical drawing department. If vocational preparation is to be provided in these departments, it must be given by the same instructors who teach courses for general education and exploratory purposes; and it must be done in the same

class room. What I am insisting upon at this point is that this third objective should be recognized and planned for by departments in the field of creative arts whether special teachers are provided for this purpose or not.

It is, then, extremely important that teachers and supervisors of the creative arts subjects hold clearly in mind the general objectives of their work, whether this work be in the elementary grades, the junior high school or the senior high school. And these general objectives must be worked out into specific objectives for the different grades and the different kinds of pupils. It is not enough for the teacher just to be on the way, to be going; he should be going *somewhere* and know where he is going. More than this, he should ask himself from time to time whether the content he is teaching and the methods he is using to teach it are the best possible means of transportation from where he is to where he wants to go.

This leads me to say in closing that we need very much better means of measuring our progress towards the goals or objectives of our teaching. We announce, for example, that our objective in a certain junior high school course in industrial arts is vocational exploratory. But we have no adequate means of checking up at the end of the course to find out to what extent the exploratory purpose has been served, to what extent interests and aptitudes, dislikes and limitations have been discovered. How do we know whether the course actually has been exploratory to a high degree or only in a very limited way? We think that such a course should have high exploratory values. And perhaps we can cite an occasional case of a boy whose vocational choice seems to have been determined by this course. But how much really valuable vocational exploratory work has actually been accomplished is mostly a matter of guess work. We need, very badly, standardized tests, prepared with careful attention to the exploratory objective of the work done, and from which subjective factors have been as fully eliminated as possible, in order to measure the progress made towards the announced objective. And we need the same sort of tests in larger measure than they have yet been developed for every other type of creative arts course. We need not only to know where we are going. At the end of the trip we need to know whether we have arrived at the point for which we started.

“Why An Art Education”

VESPER GEORGE

Director of the Vesper George School of Art, Boston

WHEN your music leader was admonishing us to sing and I didn't sing, I suppose some of you might have wondered why I didn't. I was afraid I would spoil the singing. I have the reputation in my home of doing a multitude of things, and one day when I had accomplished something that Mrs. George thought was unusual, she said, “Vesper, it seems to me that you can do anything,” and my six-year-old daughter spoke up, “I don't think father sings very well.” And so I have discovered what my limitations are.

I am asked to speak on the subject of “Why An Art Education?” To one who has devoted a lifetime to the study of art, not only from the standpoint of drawing and painting, but also from the point of view of the designer and decorator, and I may add teacher, the answer is so obvious that I wonder if I am a good one to ask. May I not be prejudiced in favor of the thing I know most about? So much enrichment of life has come to me through being an artist that I cannot conceive of life disassociated with it. If I had my life to live over again, I would choose art just the same.

There are two distinct phases of art training—the development of the appreciation of beauty for its own sake and the creating of beauty as a means of acquiring material prosperity.

It is necessary for all of us to acquire a trade or a profession that will bring us a competence, a reward that shall be adequate to give us freedom to develop ourselves to our greatest capacity. Happy the man who can combine the joy of creating with the ability to translate that joy into the necessities of life.

An art training will do this to anyone who has the talent for it and the willingness to pay the price in application and industry.

I am going to speak first of the profit end of an art training; afterward of the joy that comes of creative work. To anyone who will make even a casual examination of commercial art, it must be more than apparent that it is a field rich with possibilities of success. It is only necessary to examine the innumerable publications to see that the artist plays so important a part, that it is impossible to think of them without him. Take up any magazine today and what do you see? A cover designed by an artist; the title page designed by an artist; the illustrations drawn by artists—all ornamentation and decoration the work of artists. Then, turning to the advertising pages, which today constitute about half the book, we see a field belonging exclusively to the artists.

And this represents but one of the thousand ways to which an

artist can turn his talent. There is scarcely a thing manufactured to-day that does not have an aesthetic as well as a practical value, and all the manufacturers realize that they can no longer get on without the artist and designer. More and more they are drawing upon the most talented and successful artists for their designs. Only recently a silk manufacturer told me that he had acquired the services of Boutet De Monvel, a famous French artist, to make designs for his silks. The Este organ people paid \$15,000 for one painting to advertise their organs, and incidentally sold it for \$20,000 when they were through with it.

But this represents but one field of art endeavor. Furniture, interior decoration, leaded glass, silverware, costume designing, posters, book covers, illustrations, textiles and mural painting all call for trained and skillful artists.

Mr. Edison was in Florence, and was looking at a portrait of Leonardo da Vinci. He was asked what he thought of da Vinci and went into a dissertation of his various talents but entirely failed to mention the fact that he painted. Whether Edison did not know that he painted or thought his paintings of no consequence we are not told, but as a result of this episode Mr. Ford, being an intimate friend of Edison, was asked what he thought about art and is reported to have said that he would not give five cents for all the art in the world.

As a result of that point of view Mr. Ford had to spend several million dollars, as some one has tersely remarked, making Lizzie into a lady.

That is a good example, being ignorant of art, he had to pay a price for his folly.

The need of the artist has become so apparent that an advertising agency in New York, retains a placater, a man with tact, to treat with the artist, in order to keep his friendship against the time of need. Formerly artists were looked upon as a sort of necessary evil, and because they were not understood were avoided as much as possible by business men. A few years ago if the artist came into the advertising department he was met by the office boy or girl, told to sit down and wait, and he waited until everybody else's business was over and then he was invited to come and his things were looked over in a casual way. Disgusted by his treatment, when he gained a reputation and grew to consequence, the artist refused to work for those who had slighted him. So it became necessary to placate these artists. Now men are employed for the purpose of giving the artist the glad hand and taking his name and address and following him up so that when the day comes when he is needed they are able to engage his services. That is the state of affairs that is coming everywhere.

I believe in the artist. I thoroughly believe in him. Anyone wish to argue with me?

The manufacturer realizes that he is as indispensable as any part of his equipment, and must be treated with the consideration his value merits.

The great amount of money spent in advertising alone in this country is not generally appreciated. I have a little clipping here which I will read you: "The Union Tobacco Company will try to concentrate in its new plant in which it will advertise at an expense of \$10,000,000." \$10,000,000 for one concern! Now you multiply that by the number of concerns that are forced to do exactly the same thing, not only with cigarettes, but everything you can think of and you will appreciate what a colossal sum of money is represented. I was talking with an agent of the Ayer Company the other day and he assured me that 50 per cent of the money spent for advertising went to the artist.

A young man, one of my former students, who is at the head of the art department of Newell and Emmett in New York, told me that the field for commercial artists was unlimited, and that he could never get enough trained men to do his work. I don't know this young man's salary, but I do know that last year he received a bonus of \$1,500. You can judge what his salary is. The young man was a drug clerk in a small town in Maine only a few years ago. He came to Boston, studied commercial design, went to New York, and in a few years became head of the art department of this concern. I make no plea for the man who tries to get by with nothing. Men who have just a little education come to me constantly. They say, "Can't I buy a quart and a half of this stuff?" We don't sell it by the quart and a half or by the bushel, either. You have got to work hard if you want to accomplish something, but I believe in the end it will pay for any effort you have put into it.

In the field of fine art the same thing is true to a less degree. I am not advocating the fine arts except to those who have an abundance of time and money, as it takes years to put oneself on a paying basis, but once accomplished, applied in the right way it too can be made most successful.

My art school stands for applied art. We teach fine art if anyone wants to study it, but we believe the United States is full of talented young people who will not be Michael Angelos, who are not fitted to become a Valesquez, but who if they are properly trained can apply their knowledge to some kind of commercial art that will provide them with a splendid income and at the same time an agreeable occupation. On the other hand, I happen to know a woman who is a painter of flowers in pastel. I don't know but what you may know her, Laura Hills. She has for the last two or three years spent her summers painting pastel flower pieces. I wish you to understand that they are extraordinarily beautiful, not commonplace. She had an

exhibition in Boston just before Christmas of some forty canvases, if I may call them canvases, ranging in price from one hundred to five hundred dollars apiece. They were all sold inside of one hour and had she had twice as many she would have sold them in another hour.

Frank Benson told me personally that he had made a fortune on the etchings of ducks that he had sold in England alone. You have probably noticed that there are other ducks beside Frank Benson's. I look into the windows of the shops now and a second look is all that is needed to convince me they are not Mr. Benson's ducks. They and the ducks of the "also ran." For one man to follow in the footsteps of another and try to gather profit by somebody else's invention is deplorable. But I want to say one thing about those ducks of Mr. Benson's because it gives me an opportunity to bring to your attention a fairly important thing in the study of art, that is the necessity of knowing the thing you are doing and knowing it well. Frank Benson can do better ducks than anybody else. Why? Because he knows more about ducks than anybody else. His making those ducks was a pure accident, but it was the result of a combination of circumstances. I know Mr. Benson personally and what I am telling you is not something I have read. Every fall Mr. Benson went down to Cape Cod on a shooting trip, where he spent his vacation. He saw the ducks in the early morning, at noon, in the late afternoon and in the evening, rising from the water, dipping into the water, in every possible condition which ducks could be. Without any idea of ever drawing them, he was absorbing those ducks, and when one day he said, "I think I will make some etchings of ducks," he did it so well that he was immediately successful. He sells those ducks to the collectors to be sure, but more often to the huntsman who himself has seen those ducks under exactly similar circumstances and who takes pleasure in owning a thing which recalls to his memory that lovely sensation he had when he saw them.

And that is the point I wish to make, that you will do that thing best that you know best. Don't try to follow somebody else's game when he has it all to himself.

Banks, department stores, restaurants and theaters are more and more appreciating the value of mural paintings as an asset. I had the pleasure of putting some mural paintings in a bank in Bristol, Connecticut. Mr. Sessions, who was a man with vision, decided to open a trust company there. He built a beautiful building, finished in mahogany, and hired me to do some decorations. Then, when he had th's building all up, he opened the doors and began his business. He did that in a town where there already were several banks, but at the end of a year he had done twice as much business as he had the slightest expectation of doing. The treasurer of the Bristol Trust

Company wrote me this letter. I would like to make a copy of it and send it to every bank in the country. I won't read the whole of it, just that which has to do with this—"We dare affirm that the beautiful paintings you have put on our walls have a commercial value, people calling upon us primarily to see them out of curiosity, have later been disposed to transfer their accounts to us. One cannot estimate how much advertising pays, but we feel that your efforts have given us something of commercial value as well as a thing of beauty." And whether he is right or not, the fact still remains that that bank was a very beautiful thing and people who had deposited in banks in other parts of the city brought their deposits to that bank. Why? Why shouldn't they? Why go to a dingy, uncolorful place to conduct your business when across the street is a beautiful one? Everybody appreciates beauty, even he who knows nothing about it.

I had the pleasure of painting some decorations for the high school in Greenfield, Ohio. That high school was given to the city by a Scotchman, by the way. I wish you to remember that, and it cost him a million dollars. It was built with a capacity of twice what the city called for and already they have had to put additions to it. Why? Because the people in the surrounding country, realizing what a fine place this building was and what a splendid opportunity it offered for their children to learn, came into the city and the population of the city—I won't say it doubled, but it greatly enlarged, making necessary the additions of which I speak.

Then there is the teaching field. Many people gifted with a creative faculty find themselves lacking in the peculiar faculty of salesmanship. That makes it difficult to sell their products. Such persons often find in teaching an outlet for creative instinct and feel the divine joy of seeing their work radiating through the power they give others.

Don't let me give you the impression that anyone can be a successful artist—perish the thought! One must have a talent for it, though my idea of talent is a combination of intelligence, desire, and industry. I have been a long time studying it and I have come to the conclusion that that is what constitutes talent.

Many people, especially the young, have an idea that art is an easy profession. These will soon be lost in the shuffle. Nothing is easy that is worth while. In my school over the platform is printed in large letters—"Education is a reward, not a gift."

Paderewski said that if he neglected to practice one day he noticed it; if he neglected to practice two days, his manager noticed it; and if he neglected to practice three days, the public noticed it. It is equally true of the artist and of anything you do in the way of art. You have got to keep eternally at it, and if you will keep eternally at it, you will keep yourself fresh and give yourself the last word in

the last way the thing can be done. Eternal industry is the price of victory.

Speaking of Paderewski reminds me of a story that might interest you. It has for its moral, if I may show you, the value of training. Paderewski went one day to catch a train and he discovered he had made a mistake in the time table and the train didn't go for another hour, and having nothing to do for an hour he decided to walk down the street for exercise. He passed a house with a sign on the front—"Miss Rooney, Music Lessons Twenty-five Cents." Miss Rooney was playing on the piano and murdering one of his compositions. He rapped on the door and asked if he might play the selection for her. Miss Rooney was overwhelmed with joy and delight, while he showed her how to play his piece of music. After having done so, he left to catch his train.

He came back in a couple of days and as it was necessary to pass this house again he noticed a new sign. It now read—"Miss Rooney, Pupil of Paderewski. Music Lessons One Dollar."

Quite aside from the practical side of art is the part it plays in the development of the imagination and the art of seeing. The artist cultivates his imagination to the highest degree, until it is possible for him to get thrills out of events unknown to the ordinary man. He lives in a world of his own quite detached from the ordinary world. How many times have I seen this illustrated? I recall one special instance. I was walking in the woods in early spring with the head master of a girls' school, a cultivated and educated man. The sun was pouring down on the branches of the trees. The ground was mellow and soft. The odor of the new broken ground with the ferns coming up from it, came to our nostrils mixed with the fragrance of opening blossoms. Birds were twittering on all sides. The evidence of spring was everywhere. I felt it, and feeling it, I said, "Isn't this wonderful?" "Yes, yes," said he, "when do we go home?" I was living in a world that man knew nothing about. It didn't exist for him. He might as well have been blind or dead as far as the reaction he got out of that spring morning was concerned.

That is what the artist gets out of everything with which he comes in contact. As a part of a liberal education outside of any remuneration he might get from it, an art education is one of the most valuable things in the world.

Everything we see, everything we touch takes on a new appearance in the light of imagination and vision. Our whole critical faculty is awakened and we are not only able to see beauty in all its loveliness, but the process helps us to see the world and all life in a new light. A well-rounded art training is a liberal education. The world and all its problems are seen so much more clearly, with more sym-

pathy, with more tolerance. A man is a greater man for what art gives to him.

I don't think it is possible for a man to give himself up to the study of art and not learn a thousand things that haven't anything to do with art. Every time you read a book, every time you read anything about history, every time you read anything about humanity, you look at it with an entirely different light than you would if you didn't have an art training, for the very reason that it cultivates within you a sympathy toward the rest of mankind. I think it is a hard thing to be a first-class patriot and a first-class artist at the same time. Patriotism is provincialism, it is limited to a small area and as soon as a person becomes an artist he is not satisfied with taking in a little area; he takes in the world. I would rather talk with an intellectual Chinaman that talked my mental language than an American that didn't know what I was talking about. Do you remember the story of Disraeli? He was a member of the English parliament. He made a speech one day and someone, to discredit him, said Disraeli was a Jew. Disraeli arose and said, "Yes, gentlemen, I am a Jew, but I wish you to remember that when your ancestors were running wild and naked in the forests of the north of Europe mine were the princes of the world." And you can say the same thing of the Chinese, that while your ancestors were running wild and naked the Chinese were a highly cultivated race, and it is a strange thing that while the Japanese were cultivating the art of peace and making their country the most beautiful place in the world, we looked upon them with scorn and suspicion, but when they drew a sword and smote the Russians, we took off our hats and said, "You are one of us." Funny world we live in.

A Chinese writer once said, "One picture is worth a thousand pages," meaning of course that by looking at one picture you could get more in an instant than you could possibly get by reading a thousand pages. How true that is, and surely we see that in everything about us, that has to do with advertising. The advertiser no longer devotes himself to pages of type. He gives you a picture and with that picture you can instantly get the story he has to tell.

The artist has an opportunity to cultivate the creative faculty. We all have that faculty. We all desire to make things. We all desire to express ourselves in some way or other and the artist especially has that wonderful gift, and if he cultivates it and does it with reasonable intelligence he produces something that not only brings him an immediate reward, but which gives him a position that is irreproachable. He is a connoisseur. He is able to take a piece of paper, an empty piece of paper, and with pencil or pen put upon it the thing he has in his imagination, and the one who comes and looks at it gets a thrill out of it that he could not get otherwise.

Some years ago I wanted to do some wood carving and went to an old German who was a wood carver in my town and told him I wanted to take some lessons. He said, "Aren't you Mr. George?"

I said, "Yes."

"Well, you are an artist?"

"Yes."

"You can draw?"

I admitted it as modestly as I could. "Well," he said, "I can't teach you to carve. You come to me and I will teach you how to sharpen your tools."

I think that is one of the loveliest illustrations. That is all we can do. Teach students to sharpen their tools. That is all I claim to do for my students, and then if they have something to say, they will say it, and if not, they won't. After all, that is exactly what we are trying to do today, not literally with drawing instruments, but by giving them the principles of design. I work entirely with principles. I believe that when you have given a student the principles of design you have given him working material and he will go on and work and express himself with those principles.

I was talking today to a young man at the Cleveland School of Art about lettering and I expressed myself in that same way. I said, "I believe if you teach a student one type of lettering, the classic type, we will say, and teach him to appreciate the beauty in those letters and the desirability of placing them in an arrangement that will represent loveliness of spacing so that he clearly and truly appreciates it, you won't have to teach him anything else about lettering because all other letters are but symbols and once he learns the characteristics of the thing he can turn that same thought into any kind of type." I think I am right about that. He agreed with me.

The title of my address is "Why An Art Education." I have endeavored to point out to you some of the reasons why an art training stands pre-eminently among the first for opportunity, for joy, for accomplishment, and for material success. The combination of these should go a long way toward creating that happiness and contentment which I am told is the goal of all effort—that we may live and live more abundantly.

"What Every Teacher of the Creative Arts Should Know"

AUGUSTUS F. ROSE, Director of Manual Arts
Providence Public Schools, Providence, R. I.

IT is indeed a pleasure for me to be here with you at this convention as it is the first time that I have had the privilege of attending one of your meetings. The Eastern Arts Association, of which I am a member, held its meeting this year in New York city the first week in April with the largest attendance in its history. As a past president I bring you greetings from the Eastern Arts Association and extend to each one of you a cordial invitation to come to our meeting next spring, which is to be held in Boston on the occasion of its Tercentenary celebration.

The subject for this paper might seem to indicate that the author knows all there is to know about it and that he can tell everything that the teacher of the creative arts should know, but all he proposes to do is to point out a few of the things that seem important to him.

In developing the subject, I am assuming that all manual arts teachers are teachers of the Creative Arts, whether they are using wood as the material in which they create, or whether they are teaching printing, metal work, mechanical drawing, home economics, or, last but not least, teaching art.

In Providence all teachers of the subjects mentioned are included in the Manual Arts department, which embraces all forms of creative work from the kindergarten through the senior high school.

The manual arts teacher belongs to that group which the psychologist designates as creative thinkers; to that group which indulges in the practical affairs of men and which possesses a knowledge of things, materials, and people. He is continually thinking in terms of human needs and human relationships and is interested in artistic achievements as a true measure of our civilization. An understanding of the type of ideals and attitudes which make up the kind of civilization desired is as important to the teacher of the Creative Arts as is a knowledge of the wondrous mysteries of child nature. His knowledge of things and materials brings him in touch with people of all classes, from different parts of the world. He is able to comprehend the evolution of products made by man and is able to trace the progress of civilization over many periods and through many lands. A lesson in the study of one single element of nature, tracing it from the crude material to the finished product, recording the various industrial and commercial changes, the transportation of the finished product from producer to consumer, the number of people employed in the handling

of the material and the amount of capital involved, may furnish a wealth of interest for the child and an interrelation of knowledge that will do much for him in establishing contacts with the world outside. By the possession of such knowledge the well-trained teacher of the Creative Arts becomes versed in human needs and aspirations and is alert in the utilization of these as educational agencies.

He must know not only the possibilities and limitations of the materials which are used for educational expressions in the public school, but must know also the possibilities of the human material that is being trained to discharge its industrial duties to its city and state. He must, therefore, be a student of psychology and sociology, he must be versed in the history of education, he must know something of the vocational and prevocational opportunities available and possess a thorough knowledge of the commercial and industrial activities of his particular community in order that he may at any and all times be in a position to offer advice and guidance to those who are going out into the world to take their places among men.

The teacher of the Creative Arts acts in a dual capacity as a promoter of practical knowledge and practical ideals, in that he must know not only the proper emphasis to be placed on the academic subjects of the curriculum, but also the proper emphasis that the Creative Arts should have, in order that the two may be properly interrelated in training for particular objectives. The teacher must carry the correlation idea to such a degree of harmony and perfection that the knowledge gained through the manipulation of material things will sharpen the child's sense of appreciation, develop an inquiring mind when in unexplored fields and inculcate a wholesome attitude in his industrial obligation toward society.

The teacher of the Creative Arts should know that his field in education today is second to none and that his is the opportunity of appealing to the boys or girls through powers and ambitions which are denied to his colleague of the formal subjects. Just think of the vast amount of illustrative material we have in the world about us that is full of inspiration for the teacher of the Creative Arts if he only knows how to use it. Which one of you is unaware of the fact that the child is more interested in things done than in things said? You and I are indeed fortunate in that more of the child's training begins with "let me" than with "tell me." The child delights in learning by doing; the process is easy and natural. What child cannot easily be brought into educational activity by the project lesson? What child's imagination cannot be brought into action by the suggestion of things to be done? The making of a doll house or dress, cutting of paper patterns, the making of a model airplane or some more advanced form of manual arts in wood or metal, affords opportunities of intense interest and opens up fertile fields of intellectual curiosity.

It is no longer necessary for the teacher of the Creative Arts to make any brief in the defense of the educational value of his subject. The time is already remote when he was more interested in the shop than in the youth, but the day has not altogether passed when the art teachers and the shop teachers have ceased to be at variance as to practical and industrial problems. The shop teacher appreciates to some extent the value of art in industry and needs but little to convince him that the value of design is of first consideration after the practical needs are complied with. But, unfortunately, our minds have not as yet been put at ease when we review some school products that are convincingly bad in their aesthetic qualities. The shop teacher continues to make, or allow to be made, objects that are ugly in design. The art teacher continues to produce designs which it is impossible to carry out in materials. The fact remains, then, that when the aesthetic and the practical are happily combined the achievement is one which cannot help but exert its influence in creating an educated public taste. And this brings me to the ultimate aim of your work and mine, namely, popularizing the highest degree of artistic value in machine or hand-made products.

To a great extent our own efforts and those of our predecessors have attained very encouraging results, if we stop to compare the art qualities in the products of today with those of scarcely ten years ago. Better commodities, such as furniture, fabrics, wall coverings, clothing, the printed page, advertising matter, civic changes, simpler and less gaudy types of homes, and last but not least, the stream-like lines and beautiful proportions of the present day motor car, are but a few outstanding examples of how design has exerted a tremendous influence for finer and better things. To reiterate, I cannot make my point too emphatic, that this improvement in public taste may be traced directly to the influence of the teacher of the Creative Arts and to those few who have answered the call of an art career.

As a teacher of the Creative Arts, experience compels me to make the following statement, that the Creative Arts teacher should know that the designing and the execution of a project will attain a maximum level of perfection if he is able to be the guiding influence of the idea from start to finish. This means that the so-called shop teacher should be better acquainted with the fundamental principles of structural design, color, appreciation of fine lines and beautiful proportions. It means that he must see design and construction working in unison like the two blades of a pair of shears. It means a genuine and sympathetic understanding of design construction as a medium of expression by which the child may express his soul and temperament. It means allowing the child's inner mind to speak artistically through crude materials that it may realize its ideals. The art teacher should know more about the art in everyday life and much about the prac-

tical applications involved. The capable Creative Arts teacher is he who thinks in terms of the human material he has before him and who is able to bring together in the mind of the child the power of creative ability and self-expression.

The opportunity is yours and mine in creating and determining industrial and commercial attitudes for America's life. "Made in U. S. A." is already making inroads into foreign markets and is causing no little concern as to the dominance of our products in Europe and in the Far East. With the problem of restricted immigration, the teacher of the Creative Arts again becomes an important factor in American life, in that the future looks to him to supply artists and artisans who will maintain and perpetuate American ideals and traditions, and he should always be on the look-out for the talented boy and girl and do everything possible to help them receive the special training they are best fitted for.

The Creative Arts teacher, whether he is in the lower or upper grades of the school system, should keep in touch with the methods of the industries which his teaching in school may reflect. While the problems or the course of study in school cannot, even in a far-fetched manner, point the way for industry, yet it is expected at least that the teacher keep his pupils abreast of the present-day practices. This may be accomplished, first, by the teacher himself making frequent visits to the shops and, second, by planning yearly visits for his pupils to various industries. This contact will, in all probability, help to eliminate the old-time criticism that the boy is compelled to set aside school practices during his shop training and it will also shorten the abyss existing between the school and the shop.

Up to within the last few years the art teacher's principle job in the public schools was to place a soap box, a water pail, or a bow of ribbon before her class and say, "Now, children, you make a drawing of it." This same teacher has been rightly dubbed the Stupifier of Art. I well remember the discussion not many years ago at a meeting of the Eastern Arts Association when the question was raised as to the advisability of including design as a part of the art course.

The shop teacher's job used to be the planning of a series of joints or models and requiring each member of the class to do them in progression with the same degree of skill, thinking more about his subject than his object. The home economics teacher's function was to teach girls to make aprons, night caps, ginger bread and jelly.

Today the art teacher's work is difficult to describe in a few words because it is so far reaching, touching as it does nearly every phase of school, home, industrial, and civic life. He should develop an appreciation for the universe in which he lives and the untold beauties in nature about him and open the eyes to the beautiful in the innumerable things he is surrounded with in daily life. In short, he is

to bring beauty home to every boy and girl that they may enjoy life to its fullest measure.

Today the shop teacher's job is to give training in those things that are the common needs of all men. To contribute to the formation of good habits, such as neatness, accuracy and perseverance. To develop initiative, self-reliance and creative ability. To develop an appreciation of and a demand for good workmanship, beauty of line and form. To give an understanding of the materials and processes most widely used in production, rather than to develop a high degree of operative skill. To give an insight into industry which may lead to the discovery of interests and abilities not known before, and afford a basis for vocational choice. To give specific training in matters of general value rather than to give direct vocational training.

Today the home economics teacher has to do with that vast content in our system of education which deals with the home and the home maker. Teachers in this field are just as much teachers of the Creative Arts as any other, and perhaps a little more so because their work today is so comprehensive. In addition to knowing all that they were required to know ten years ago about the chemistry of foods and their preparation, and the making of clothing, there is today a vast amount of subject matter included under the head of home economics. The teacher must know color in dress and in everything in the home, the principles of design and when and where to use decoration. She must know good arrangement of furniture and all other objects in the room; how to select furniture, rugs and other floor coverings, pottery, china, glass and silverware. She must know good design in dress materials, clothing design as related to the human figure, how each individual should dress to look his best, the problem of daily living and its solution, the training of intelligent purchasers and users of food and clothing, child care and family relationship. These are but a few of the functions of the home economics teachers of today.

Before the teacher of creative arts can function in the fullest extent and fill his place in our modern school system there are a few definite things that he should know. Every teacher of the creative arts should first know his subject matter both theoretically and practically, including design and a knowledge of the crafts, together with good taste.

He should know the best teaching methods and possess ability to demonstrate them.

He should know that he cannot teach his subject today as he was taught twenty, ten, or even five years ago.

He should know that tact, sympathy, and imagination are valuable assets, and he should also know how to meet human situations in which teachers and children are involved.

He should have insight and courage to deal justly with situations demanding improvement.

He should have a fine enthusiasm for high ideals which shall include beauty as a part of the daily life of his pupils and realize that much can be imparted unconsciously when the right environment is created.

He should know that he has the biggest job in the world today in that he has a hand in imparting to boys and girls that something which is to become the very texture of their lives.

He should know that he is working with boys and girls who are to become not only the future consumers of every commodity of life, but manufacturers of various kinds of goods or salesmen of goods.

He should know that his work is something more than a job, and that to do creative work he must enter into it with his whole organism.

He should know that he is but a part of an organization and that he is but one member of a team and that in order to have team work there must be the closest cooperation.

He should know that in order to maintain a professional spirit he must keep alive by taking an active interest in the various associations that have as their aim the promotion of the arts.

A few years ago the following questions were asked by Joseph F. Daniels and published in the Craftsman Magazine. I am wondering if they do not apply today:

With color and form and beautiful design, what have children learned from you of the beauty of life?

With T-square and triangle, plans and perspective, what castles and visions do they see?

With shops and wood and metal and books what have you taught?

With straight edge, plummet, compass and square, what direction have you taken?

With pulley and shaft, alignment and drive, what bearings have they found?

With lessons, tasks, examinations, diplomas and intellectual equipment, what are we all forgetting?

Is the genius of a people to be nourished on blue prints alone?
Are we a nation with a destiny, or are we just "doing time?"

Isn't it funny that princes and kings
And clowns that caper in circus rings
And human beings like you and me
Are workers for eternity?

Each is given a box of tools,
A shapeless mass and a book of rules,
And each must make ere life be flown
A stumbling block or a stepping stone.

“Measuring Men”

JOHNSON O'CONNER

General Electric Company, Lynn, Mass.

SCIENCE has taken the the physical characteristics of the human being firmly in its grasp, not only by measuring a great many of them but even by formulating some of the laws which govern their passage from one generation to another.

Mental characteristics are not as well understood. Are there such things as mental characteristics, and if so, can they be measured? Can they be reduced to scientific terms? If possible, I want to make mental characteristics seem a little more real to you, a little more concrete, than they have been in the past.

I have here some simple apparatus which I wish you would think of as you would think of any laboratory apparatus. If you go into any laboratory you will find apparatus which in and for itself has no intrinsic value, such as chemists bottles, but those bottles can be used to find laws which may be of some scientific value.

The simplest piece of apparatus is this board with a shallow tray at one end and with one hundred holes in it. We asked one thousand girls to pick up three pins at a time and to put them back three in each hole. Among a thousand girls we found one could do it in five minutes, another who took fifteen minutes. One girl took three times as long as another. At first glance that seems a very small difference to find among one thousand persons. Compare that for a moment with physical characteristics. When we see a man five feet tall walking with a man six feet two or three, we think of it as a striking difference. Or if one person's feet are two or three times smaller than another's, it is remarkable. But here we have the invisible characteristics. We find one person takes three times as long as another in doing exactly the same thing under the same conditions.

Take another laboratory experiment, two columns of numbers. In the first column there is the number ninety-six and here is 96. Those two numbers are the same, and we ask a man to make a check mark in the third column if they are the same. The next is 64 and 68 which are different and we ask a man to make a check mark if they are different in the fourth column under the heading “different.” They are either the same or different all the way through.

Again we asked one thousand men to try the test and we timed them. One man took forty seconds. The longest was three minutes. That is, the fastest man was five or six or seven times faster than the slowest. That is a great deal of difference, and a greater difference than we find in physical characteristics. Even that isn't the full difference between those two men because the man who did it in

forty seconds, did it correctly while the man who took three minutes made five mistakes. The slow but sure is no longer true. From the work we have been doing in the laboratory in the last six or eight years it seems that the slow but sure is a mistake, because if you take a group of men who have been fast in the tests, have taken less minutes you find they have made less errors than the slow group. We took one group which could do it in less than two minutes and one group which took longer than two minutes. Those who took less than two minutes made fewer mistakes than those who took longer than two minutes. Of course, that is in the main, but you will pick out exceptions here and there, where one man has rushed through and made several mistakes, or another will go slowly and carefully and has gotten it correct. But in general the groups fall into the fast and accurate and the slow and inaccurate. Now in checking them many times you will find the best man is thirty times better than the poorest.

Two men came to the laboratory. It happened they had been roommates at college. They were both technically trained college graduates. They were roommates during their last two years. They had nearly the same education, and as nearly as you could tell they came from the same home backgrounds. In talking with them there was little difference between the two men, and we showed them this block. We explained that it was made up of nine wiggly blocks like this. It had been cut through into three piles of three blocks in each pile and also in the three layers were three blocks in each layer. Then we mixed up the blocks and asked them to put them back together again. One man did it in half a minute with no trouble at all. The other worked half an hour before he succeeded in getting his back together. Of course, there is a good deal of luck in happening to pick the right one, and so we asked the two men to do it again. The first did it a second time in the same time and the one who did it in half an hour improved and it took him only twenty minutes the second time, twelve minutes the third time. Even the third time he was twenty-four times longer than the other man.

What is that striking difference between men that make some thirty times faster than others? I have known of some instances where one man was sixty times faster in putting the blocks together. Apparently it isn't entirely education because these two men had very nearly the same education and very nearly the same background. It is impossible to analyze education and know what it can do and what it can't do.

Let us, therefore, take a simple case and see what education can do in that particular case. We asked one of the girls who was slow in picking up pins, who took fifteen minutes to pick up the pins, to come into the laboratory a second time, and she improved and it took

her thirteen minutes. Every day for a month she practiced and every day she showed a little improvement over the day before. She did very much better than she had done at the beginning, and that is so with each one of the different tests. Anyone who repeats any of them many times will learn to do that particular thing. It is more than probable that anyone will improve through repeating a thing again and again.

Instead of watching one girl and rather marveling at the amount of improvement she can make, let us compare two girls. We asked two girls to come into the laboratory—one who picked up the pins in three minutes and one who picked them up in twelve minutes. The first girl did it in two minutes the second day and the twelve minute girl improved and did it in eleven minutes, which was yet five and one-half times slower than the first girl. That is, the slow girl was still slow and the fast girl was still fast. Then we asked each of the girls to come into the laboratory every day for a month. At the end of that time the twelve minute girl had learned to cut her time down so that in the fourth time she did it in eight, the sixth time in six and then she got down to four, and still the slow girl was just twice as long as the fast girl and that also holds on each one of these different tests. It held everywhere apparently except on the wiggly blocks. There they tried again and again and the half minute man couldn't improve very much because a half minute is just about as fast as you can think the thing out perfectly. The half hour man will gradually improve so that at the end of the time the poor man will do it as fast as the good man.

With that knowledge it looks as if education can make the poorest man as good as it is possible to be. To check ourselves we made up another block exactly like this except that instead of being ten inches long, it was six; and it was twenty-two inches high and wide. It was cut through in identically the same way as this one and we mixed up the new blocks. The man who originally took a half hour and then improved to half a minute took half an hour again to put it together while the half minute man put the new block together in half a minute with no difficulty at all. He decided it was the same thing except for size. The slow man had learned to assemble one set of blocks and when I gave him another set he was as lost as if it had been a new test. We had taught him to do one particular thing but not how to analyze that problem.

Realizing then this, that the fundamental abilities are apparently altered very little by training, it seemed to us very important to put the right boy in the right kind of work. Looking at it from the standpoint of large industry, if the wrong boy is selected no matter what amount of training we can give him, no matter the amount of education, his equipment will never be as good as if the right one had

been placed on that job with the same education and the same training.

As a first step toward measuring these abilities and trying to place youngsters in the type of work for which they are naturally best fitted, we tried to make up a sample of each different type of work we have so that a youngster can come in and try a dozen or fifteen samples, and we can get some idea from what it does, how he will actually do afterwards. The pins for example. That is a measure of any kind of work requiring finger dexterity, handling of instruments, assembling, and so on. The number checking is a measure of clerical work, accounting work, stenography, the whole general clerical field. The wiggly blocks is a measure of engineering work or any type of mechanical work requiring ability to see three dimensions, such as structure, designing, mechanics, architecture, designing engineering, the whole group of men who are called upon to visualize three dimensional structure.

Let us take one of the samples and go through step by step the development. Take, for instance, the sample which shows mechanical ability or engineering ability. We wanted something which a good engineer would do well, and so we made up something that we thought would measure engineering ability. We reasoned the thing out as well as we could. We asked a group of men, successful engineers, who had been in the work long enough so that we knew they were good engineers, no matter what they did with this particular sample, and asked them to come in and try out the sample, and they did it poorly. And so we thought there was some mistake in our reasoning because the fact that they did the thing poorly was indicative that the thing was not a fair representative sample of engineering. So we discarded that sample, and then we made another. We made thirty samples of engineering. In that way we finally found something of meaning to men who were good engineers and who could actually do it well. Men not trained as engineers do fairly well in this and that gives us the mechanical objective, and one of separating men who are good engineers from those that are beginning.

But those good engineers may have done that for one or two different reasons,—because of their engineering training, because of their engineering knowledge, or experience, or they may have done it because of some ability or engineering aptitude or gift for engineering, and we wanted to know whether we were measuring the training or the ability, so we took the next step, which was to try a group of boys who were going into an engineering college. This was eight years ago and we graded them A, B, C, and D, and we have followed them through, and since then out of 100 A's seventy-five have since become a success in some kind of engineering; out of 100 B's thirty have become successful; out of 100 C's ten have been success-

ful, and out of 100 D boys seven or eight years ago only two have become successful in that same type of work.

So if a grade D boy wants to become an engineer, we don't tell him he never will make an engineer, but we tell him his chances of becoming an engineer are two out of a hundred. We have measured enough hundreds to know that out of every hundred boys graded D, two become successful engineers. We tell him his chance is two out of a hundred and if he is interested in engineering and doesn't want to do anything else, he ought to by all means take the two chances in a hundred and he may become just as successful an engineer as the seventy-five A men. But in going into engineering his chances are less certain there than perhaps somewhere else. The C boys have ten chances in a hundred and the B boys thirty chances and the A boys seventy-five.

We moreover analyze the field and then we tell them their relative chances in a dozen different types of work and make them analyze their own responsibilities a little more thoroughly and perhaps analyze them without tests.

And yet, tests of this kind must be used with a great deal of judgment. So many persons give a test of this kind and say this boy will become so and so. Tests mustn't be used in that way. There are other factors which enter and they must be given with a great deal of care and judgment. I had a very interesting experience in the giving of tests with judgment. I was in Paris and I wanted to become a taxi driver for the experience. I made myself up to look like a taxi cab driver. They all wear beards there and I knew I could get away with it. I knew I would have to take a test and I found fault with it, the way they all do. The examiner said, "It is very easy."

"All right," I said, "I will take it."

I went in to take it and the little French I knew deserted me completely. I was nervous and I knew I was doing miserably in it. I knew I had failed and I was disappointed to think I would have to come back and not be able to say I drove a taxi cab in Paris, so I went around again to see them and I found that I was the second lowest. I got almost nothing at all. And yet, to my surprise, he sent me to another man. After interviewing a dozen men I got my taxi and drove it for a week. I had very good earnings and it gave me courage enough to ask how it was that I happened to get the job when I did so poorly in the test and he said, "You did very poorly in the test; poorer than anyone that has ever taken it, but we try to give these tests with judgment." He said, "You may remember a question. One of the questions was, Suppose a man should give you a fifty franc note for a seventeen franc bill, how much change would you give him?" and you said twelve instead of thirty-three, and you answered in that

same way every time. You showed a remarkable and natural ability to shortchange the man."

The test must be used with judgment. The type of test with which you are probably most familiar is the so-called general intelligence test. There are almost as many definitions of general intelligence as there are psychologists, but underneath that diversity of definitions are two fundamental notions. Intelligence may be, just as the word suggests, truly general, or it may be something more than that, as the rays of a searchlight turned on a problem which helps to solve that particular problem, or there may be certain facts in which intelligence plays little or no part. We begin to think of intelligence not at all as truly general, but more or less specialized or limited in certain conditions. Or there is a third way,—we may use it to mean a group of abilities embodied in such a way as to make a number of abilities for a more intelligent use.

Let us look at the three possibilities. Suppose for the moment that intelligence is truly general, that it is like the rays of a searchlight being turned on a problem. We then find out that truly intelligent people can do almost any task that we ask of them and do it better than the average person. We then ought to find that the truly intelligent person can pick intelligent people better than the average man, and we ought to find that that same intelligent person can check numbers better than the average man, again not perfectly, but better than the average, so that we ought to find a group of men who do the pin test and who do the checking well, and they ought to be an intelligent group. Another group of men will do both the pin test and the checking test poorly, and that would be the unintelligent people.

Yet, actually analyzing it we find that there is no large number of persons and no large group. We find the two abilities scattered among them all. Then is it wholly by the laws of chance? If, for instance, we deal out playing cards, two cards to each person, we would find a quarter of the people would have two black cards, a quarter two red cards and a half would have one black and one red card. The cards would fall wholly by the laws of chance. And so with those abilities. A quarter of those men would do well in both, a quarter of those men would do poorly in one, half of the people would do well in one and poorly in the other. These two abilities then are scattered among this group wholly by the laws of chance, so that a man may have both abilities, or either one, and not the other.

And yet after all that you will only have what you might have had before you started the experiment. Such a thing as picking up pins is hardly thought of as requiring intelligence, but let us put that aside then and consider for a moment these two facts. Again, if there is anything such as general intelligence, we ought to find that one

group will do these tests well. Another group will do both these tests poorly, and yet again when we measure large numbers of persons we find that the two abilities are just as scattered as the red cards and the black cards. Both groups would have one ability and lack completely the other.

And in that way we have been able to divide intelligence into perhaps five separate and distinct parts and a man may have any four of those parts and lack the fifth completely, or he may lack the four and have one. It is very difficult for us to realize how separate these abilities may be. I made almost that same statement before a group of school teachers in the western part of New York state and the superintendent of schools instantly got up and said he knew there was such a thing as intelligence. He said you could pick out among your friends any of these things simply through the intellect and he had boys in his school that he knew could do this thing which he thought only required a child's intelligence. And he wanted to know if I would be willing to test this out on four boys of sixteen years of age that he knew had never been able to go beyond the fourth grade in school. I told him I would if he would come in himself and take the test. He thought it was entirely unnecessary, but was perfectly willing, and so he came into the laboratory the next day and he did unusually well with the pins and checking, but when he came to the blocks it took him half an hour to get the blocks together. The next day he brought in a very backward boy and he put them together in a minute and a quarter with no trouble at all. We tried him over three times simply to be certain it wasn't luck. He analyzed the thing perfectly. It was impossible to teach him how to check the two columns of figures. He couldn't check even the simplest number and he had no conception of whether two groups were the same or not. But he had the mechanical ability to see structure and whenever a mechanical problem was given him, he could do it instantly and quickly.

These tests can be used to test the younger children and when some are found who are not interested in their studies, but have mechanical ability, if they are trained along some mechanical line they certainly will be at least self-supporting members of society instead of being abnormal children and probably always living at the expense of the state.

It is very easy then simply because a boy fails in a school subject to think that he is going to fail in everything. The reverse is not true, either. A great many localities follow the practice of instantly considering the boy an excellent mechanic, and that is not so. The boy may be good mechanically, and yet mechanical ability is as important as school ability and the boy possibly is poor in school.

For the past two years I have been attempting to measure executive ability. Executives as a group will do well and I have been

asking groups of executives to try out all types of tests. When we start measuring the executives we find this thing which I am calling general intelligence. Among the executives is a group of men who know a surprisingly large number of things. If you take sixteen unselected persons you will find that four do the tests well, but if instead of the sixteen unselected persons you take sixteen executives, you find that six or seven out of the sixteen will do all of the four tests well and not one will do all four tests poorly, due very largely to their very wide range of abilities.

And yet if you analyze that a step farther you find it isn't really general intelligence. Instead of general intelligence you will find more nearly a collection of abilities. I remember one executive to whom I described these tests and whom I tested in London. He couldn't believe that he wouldn't be able to do all of the tests. He thought perhaps that was true about American executives because he thought they were more one-sided than the English executives. He was certain that no English executive would do those poorly. He offered to come into the laboratory the next day and I tried him on number checking and he did unusually well, absolutely accurate and very quickly. I told him he did exceedingly well. He pushed it aside and said, "Proceed!" So I tried him on the test for personal ability, and again his score was high and I told him so. He pushed it aside and said, "Proceed!!" So I tried him on the test of the English vocabulary. And in this test he made the score next to the highest of anyone who ever took it. I told him that his score was next to the highest and in an unusually cold tone he said, "Proceed!!!" as he pushed it aside. I tried him on the wiggly books and in ten minutes he got up and went into another room and the stenographer got up very carefully and closed the door between the two rooms. You remember that he scored unusually high in vocabulary. After something like twenty-four minutes he succeeded in getting the blocks together again. He couldn't understand why he couldn't do something of that kind. He did it over and he improved as much as the average man the second time. He took it much more to heart, and later I explained to him the difference. He said on two different occasions he had had financial difficulties and each time it was because he insisted upon mechanical contrivances.

Almost every executive has one weak spot of that kind. You can give an executive a dozen things to do and he will do almost all of them well, yet here and there will be something that he does not only do poorly, but poorer than anyone else. If we think of this as truly general intelligence it would have helped him a little when it came the wiggly blocks. It didn't help him and so what this man had was not truly general intelligence, but a very large collection of special

abilities, and yet here and there one ability which was completely lacking.

Almost every executive you find will have that same thing. You will find a strikingly large number of abilities and yet here and there one lacking wholly.

The second executive characteristic is likely to be objective personality. There have been an enormous number of attempts to measure personality. The first was a book which appeared fifteen or so years ago. It explained it as something like bromide and sulphide. The bromide did what you expected. The sulphide was more unusual and apt to do the unusual.

The Bryn Mawr girls have a slang expression for the men. They call them either "jiggers" or "goons." I don't know which are the "jiggers" and which the "goons." Each time I ask I get a different answer. One is a perfectly commonplace type of man, and the other is the unusual man who does the unexpected things. A German physiologist divided men into a good deal that same way, only a little more scientifically, because he used scientific terms. He called them "cycloids" and "scisoids." The "cycloid, is round, fat, never loses his temper, isn't quick and gets along well with everybody. The "scisoid" is that long, lanky fellow that carries a grudge for years without letting it come to the surface.

Even this isn't a scientific classification. We wanted a scientific way of separating these two different types of persons. So we used the word "tiger" and said it to the man and asked him to answer the first word that came to his mind connected with tiger or suggested by tiger, and one man said "milk." I have trained myself never to show surprise at any type of answer I get. I evidently didn't live up to my training because he said, "You look surprised."

I said, "I tried not to show it."

He said, "I have a friend that sends me a case of Scotch and now-a-days he writes on the side in great black letters across it "tiger's milk," and the box had just arrived." That man instantly thought of something personal, peculiar to himself, a purely personal experience. He was the subjective type. The next man whom I tested when I said "tiger," answered "butter," and I think I was even more surprised, and he explained that his youngster had a Black Sambo, which describes Tiger Butter. Another man, when I said "tiger," answered "tiger," and I knew he was thinking of Blake's "Tiger, tiger, burning bright, in the forest of the night." This man was a cartoonist and he reads aloud to his children at home in the evening and he is a lover of Blake. There were three personalities, quite different from everyone else.

Out of 1,000 men only one man answered "milk," one answered "butter," and only one answered "tiger," but out of the 1,000, two

hundred and eighty-five answered "animal." The two hundred and eighty-five probably means that two hundred and eighty-five men are taking an objective attitude, not thinking of the personal experiences, but standing outside. If you could get a group of men to take a perfectly objective attitude they would all come to the same conclusion. When a man gives the same answer that has been given by a large number of other people, his is the objective attitude; but when he gives a different answer, he is more unusual and has the subjective attitude. If you measure a large group of unintelligent people, they will always give the objective answer; the research man on the other hand will give a subjective answer.

This really tests the group worker from the individual worker. The executive or the sales type of worker gives certain answers. The research man, the scientific man, the designing engineer will give individual answers. The test really separates the group type of worker from the individual worker.

A word of caution is always needed with tests of this kind. Having heard a test described, it is very easy to think that one wants to start in instantly using tests of this kind. It seems to me that to use tests of this kind unless they have not only training, but a great deal of training, instructors ought to leave them out. If you have ever tried to do chemical experiments you will realize that you can follow the rules and do exactly the same thing, but very often you won't get the results you want, and yet it is all right to dabble in chemistry. In testing a youngster unless you are experienced you may do a great deal more harm than good and if you make a mistake you can't very well throw him aside as you can throw a chemical aside. You may be doing him harm.

When men write to me and say, "Won't you kindly send me a set of your tests, I tell them that tests are very important, and it is very important to use standard tests." It is very little more than a thermometer test and a set of weights. These standard tests are nothing more than the materials to use, so that I feel very strongly that no one should attempt to use tests unless he has given four or five hundred tests and unless he is willing to spend five years doing absolutely nothing but testing work.

Some men are attempting to dabble in these tests an hour here and an hour there and not only doing youngsters a great deal of harm but the whole field of testing. Even if we have a perfect set of apparatus, but are attempting to use it without having standard conditions and a laboratory especially equipped, we will be doing nothing. And I can't help but feel that we would be doing a great deal of harm.

“Art—The Essential Factor”

CHARLES FABENS KELLEY

Assistant Director of the Art Institute at Chicago, Curator of Oriental Arts and Dean of the School of the Institute.

MY first acquaintance with this organization was some years ago, when it had a very much clumsier and less intelligent name, “The Western Drawing and Manual Training Teachers’ Association.” Nearly fifteen years ago I attended a round table in St. Louis, out of which came the “College Art Association of America” and for three years I was secretary of the association, leaving at the end of that time because I felt that they were following false gods. They became more interested in archeology than in art, and since I am more interested in the actual art and the productive side of art I felt I was a positive menace in staying. But I shall not forget that meeting we had in Cincinnati, when we were trying to adopt the constitution. We had a committee on constitution which had worked for some time. The meeting had adopted the first article of the preamble when an old gentleman got up and said, “Ladies and gentlemen. You are all wrong. We are calling this the College Art Association. Why, what is art anyway? Until we have decided what art is, we can’t adopt the constitution.”

It took us some time to shout him down, because nobody knows what art is and never will, I suppose, and then we proceeded to adopt the constitution.

A few years later, when I was connected with the art department of Ohio State University, on a final examination I was unkind enough to ask the students what art is. Some of them were so keen as to remember that I didn’t know any good definition and said so, and then proceeded to give me very satisfactory definitions of their own.

The desire to be an artist is not necessarily commensurate with a person’s ability. We all know persons who insist on singing and nobody would accuse them of having the remotest tone quality or knowing anything about what music is. Mere industry is not sufficient, as the previous speaker has very ably remarked. Somehow he has made many points I should like to have made much better than I could do.

I believe, contrary to most of the prevailing talk, that economics is the greatest factor for good art production. There, you may say, the American dollar rears its head again, but let us see what has happened in the great periods of art. There never has been a great period of art unless a definite objective was in view. Let us go back,

for instance, to the cave dwellers. We marvel at the beautiful drawings made some twenty-five thousand or fifty thousand years ago in the caves of southern Europe. They were done, not because the person was interested in expressing himself at all (that is a perfectly modern theory); they were done because they felt that if they could draw pictures of animals it would be a charm which would lure the animals within the reach of the hunter, and since they lived almost entirely on a meat diet in those days, it was natural that the man who knew how to draw was considered the best artist, and he probably got quite a good deal of pleasure and enjoyment out of doing this thing.

But he wasn't thinking of self-expression at all. The pleasure and enjoyment he got out of it was a by-product. No one of us, I suppose, enters a business just for the pleasure it gives him, but no one of us wants to be so unfortunate as to be connected with anything that doesn't give him a tremendous amount of pleasure.

If we take the art of the cave dwellers and the art of savages we find very definite economic reasons for it. The artists made stamps or badges for the tribe, the trade mark of the tribe, so to speak. Then there was the tattoo. Only a very courageous person could stand the process of being tattooed, and finally, it made the men more attractive to the ladies, and, (among savages at least), there is no greater economic factor for success than a good strong wife who is willing to work, so the better the tattooing the wider the choice.

Then in Egypt was that hierarchy of priests who held the fear of the future over the heads of the populace. The priests were in league with the undertakers, and the undertakers were always interested in making their offices as attractive as possible, so this stimulus of the art impulse in Egypt is connected primarily with religious beliefs and the priesthood. You paid your money and got salvation in the terms of lasting art. We don't believe in the Egyptian religion. We really don't know what they believed, but the products of their religion are things that nobody can prevent us from enjoying.

Now, how about Greece? We remember that one of the classic examples of graft in Greek history was that the funds of the Confederacy of Delos were diverted to beautify Athens because she happened to be the chairman of the Delian League. We also remember that when Pericles was indicted by the people of Athens, he was indicted for diverting the funds and beautifying the city in a perfectly scandalous way. He said, "Very well, I am perfectly willing to bear the entire expense out of my private pocketbook." Being a successful politician he could do that. "But," he said, "It must be known that I paid for it." That was another matter and he was at once "white-washed," to use the technical term. The glory that was Greece and the grandeur that was Rome was all a matter of economics. Of course,

the artists felt that they were working in a profession they would rather be in than any other.

They were working very, very definitely toward a purpose in the medieval times also, and that was toward the growth of great cathedrals. First of all we can lay that to the fact that they believed that the world was coming to an end in the year 1000, and the people in the holiest places would have the best chance. They wished the holiest of relics and when a town of any magnitude did not have a church in it with good relics, it was necessary for them to acquire some. This they did, and the Pilgrims came and visited the relics and left offerings. So the church was built, which glorified that town and brought trade and prosperity, just as conventions do in Chicago and Cleveland today. The churches were ecclesiastical monuments for economic purposes.

Let us look now at medieval Italy, at the time when Florence had a number of princely families in keen rivalry one with another. They were inter-marrying with other princely families and their daggers were constantly at each other's throats. It was necessary for a prince to gain the confidence of his retainers by stimulating their imagination, and this necessitated building a palace grander than the last palace by a member of the rival faction. It never occurred to him to stop building until he had called in a sculptor and painter and wrought iron worker. To do anything else would never have occurred to him and he would never have presumed to separate sculpture, painting and architecture and what we call the minor arts today. That is a very recent development and very insidious and a wrong one.

Then, too, they produced beautiful ecclesiastical paintings at that period. We must remember that these powerful nobles were made officials of the church and it was necessary for them to carry the glory of their nobility over into the most glorious churches that they could make.

It was necessary to have portraits painted because they were inter-marrying with other princes and the bridegroom didn't have time to court and look over the girl he was going to marry and her family couldn't send her to him with the chance that she might be turned down. A portrait of her was sent instead, and that is where the portrait painter came in. There was a definite economic reason for portrait painting which lasted through the middle ages and the Renaissance. It is a stupid thing to try to paint many portraits today when we have cameras and when most people are too busy to sit still.

Now, these works of art were produced in the bottega, the workshop of the middle ages, such as was conducted by the artist Perugino, who lived in the Perugia where he took his trade name of Perugino. Perugino was a great painter and also a competent designer.

He wouldn't turn out a piece of painting for a niche of a church which he knew nothing about. When he had something to design, it was all for a definite purpose. The person that came to him last as an apprentice and who was the most ignorant of art processes of anybody in the shop, would be put where he could do the least harm and that was sweeping out the studio. He would continue sweeping until somebody quit, and then he was moved up a step and was allowed to wash the brushes. He was given the jobs that everybody else didn't want to do, and there was a definite reason for each.

That was in the glorious periods of art. The trouble with our art education of the present day is that we don't know where we are going, but we are on our way. We say, "Let's create something." What, for example? Why should we think about that? The general intelligence of artists can easily be seen in the present day by going around to exhibitions and seeing what hideous frames painters will put on their pictures. Unfortunately, the large bulk of artists painting at the present time are inexcusably ignorant and the large bulk of the public who are buying art is also inexcusably ignorant of art. Why? Because it has simply not taken the trouble to analyze it.

The art conditions are in just two parts—having something to say, and second, knowing how to say it. How can you say anything when you don't know what you want to say? That is logic, isn't it? Most of our art schools are training painters just that way. Go out and produce something. How do they know how to produce unless they know what they want to produce? The only art that has ever been worth while is the production of a subject that has been thought about so long that a person feels about it deeply and then he writes a symphony that lives or paints a picture that will never die, and those are the only conditions under which to produce things of that kind.

I should like to draw a parallel between the Florence of the early times and the America of today. In place of royalty in America we have the great corporations. In place of the nobility we have the captains of industry. What is the difference between the so-called lower classes? Just this difference—that the commoners in the Medici's time had practically no power. The common people, as we call them today, have a great purchasing power. Now, let us see what the peasants used in the middle ages and contrast it with what our people have of purchasing power. They had fewer, but more beautiful things. Why? Because they were forced to be self-supplying. They did not rely upon others for the things which they used. They were forced to make pottery, furniture, and they are still doing it. They make beautiful and craftsmanlike things. I had a chance to check that up recently in three countries which are new to me—Jugoslavia, Norway and Sweden, and I got a particular thrill out of visiting the Museum of Peasant Culture at Zagreb in Croatia, the

home of Mestrovic. The things were beautiful. There was a high standard of production and a very exquisite sense of good taste right through, and the people in the market place were wearing out embroidered shirts that were probably one hundred years old, passed down in the family as the best shirt until it got ragged and then used when they were selling vegetables. They were exquisitely designed. That design grew out of the feeling for the necessity for the thing and the great satisfaction of doing something which was really needed.

To come back to America. I don't see much use in painting portraits in America now-a-days. I recommend sculpture, not as the Rogers group is used, but to adorn the remarkable buildings which are being built. Paintings should adorn the building as well, to show one corporation the amount of self-respect the other has.

There is, by the way, another type of painting which didn't interest the people of the middle ages, but which should be of interest today, and that is landscape painting. Isn't it a stupid thing to have a painting of a steel office building hanging on the wall in an office building? I think a great many men of vision and understanding and sympathy today, when they can look out of their windows and see office buildings being constructed, would prefer to have paintings of trees and flowers and landscapes on their walls. Why should a man prefer to have a painting of buildings going up, when that is all he can see from his windows? If you have a little of the out-of-doors in your office you can stop and look at it for five minutes in the middle of a busy morning or afternoon with great relief.

Many crimes are committed in the name of craftsmanship. There is a store in Chicago, which has a group of branch stores, and from fifty to a hundred women on Saturday afternoons there commit atrocities in the name of art. They are making things in tissue paper and sealing wax,—affairs that are most offensive, and these women defile their homes with them, thinking they are practicing art. Now,

YOU CAN AFFORD

Only the best where the interests of your children are concerned, whether it is pictures, books or pencils. In pictures it is the UNIVERSITY PRINTS.

Let us send you our catalogue of inexpensive prints, showing the many ways pictures may be used in school work.

UNIVERSITY PRINTS

2 BOYD STREET

NEWTON, MASS.

there is absolutely no excuse for that because most women are well dressed,—tastefully dressed. Most of them ride in motor cars chosen largely for their lines, (for you can't get a motor car today with a bad engine), and they go home to fairly attractive houses. They must have a certain amount of intelligence because they realized what their problem was before their dresses were selected. If that same care were applied to the purchase of painting, if they merely had the courage of their convictions, art would make tremendous progress.

I will tell you one story. Poiret was in New York holding a dressmaking clinic with some women and telling them how they should dress. One poor unfortunate woman was very bulky, and she said, "What can you suggest for me?" It was more than the good man could stand. He said, "Ze good Lord has clothed ze elephant in gray." Now, without being sacrilegious in any way, but in a most reverent spirit, I may say if we follow our Maker's example in conforming the problem to its needs, we will never go wrong and the result will almost invariably be artistic. I thank you.



What Europe Is Doing In Graphic and Industrial Arts Today

HENRY TURNER BAILEY

Director of the Cleveland School of Art

MADAM PRESIDENT, FELLOW TEACHERS: In an address before the Art School students this week, Tuesday morning, Professor Loesser, of the Cleveland Institute of Music spoke upon modern music and musical composers. He said they were divisible into three groups. He called the first group those who by temperament are happy to stay in the place where they were born. They find themselves living on an estate that has been in the family for generations, an estate they have inherited, and they are perfectly willing to stay there all their lives and enjoy what their ancestors have done for them. He said the best of those people cultivate the estate a little more intensively, possibly add a new flower garden in the front yard, plant a few new trees in the orchard, but they are perfectly content to stay where they are. Those are the conservatives in the realm of music, and I am sure we can press that right over to similar conservatives in the realm of art. They are thoroughly convinced of the importance of our heritage. They know the history of the arts; they know the good, substantial Renaissance style of painting; they know the methods of historic design, and they are perfectly contented to continue the traditions.

They are brilliant, possibly adding one or two triumphs, but always on the basis of the old.

Then he said there is a second group in music that he called the pioneers. They come from this excellent stock, but they are not content to stay at home. They feel a little smothered by their local environment and therefore they branch out for themselves. They go out into the advancing margins of civilization. They take along the old ideals. They have no new ideals, except that they want to do something a little more advanced, but they take along the old traditions and after a while you find old traditions being embodied in new places, and because of the new environment they are producing new examples of beauty. The same principle of gardening is used in New England as in Pasadena, but when a New England man gets to Pasadena his garden has a little difference in appearance because of the new environment. Those are the progressives in music, he said, and you know that in art we have a corresponding group who are the progressives in art. He said some of those pioneers sometimes may be called homesick pioneers because they always regret that they moved out from that old environment and they cling tenaciously to the old ideals and modify them but slightly.

Then, he said, there is a third group in music, the Bolshevics, the socialists, the radicals, who think that everything that has been is bad upon principle and there is no hope for the future unless you overthrow the monarchy, overthrow the bureaucracy, overthrow democracy, whatever it is and begin all over; clear the land and strike in again. Those are the people who make us the most trouble. Their one motto is "Damn everything that has been." Now, you know we have plenty of those in art. If perspective has been respectable, out with it. If there is a recognized harmony of color, wipe it out and begin again. If there is sufficient balance, composition, away with it. If there is such a thing as interrelation of line, away with it, put the thing down smash. They throw a bunch of tooth picks on the table and call that good order,—no law, no order.

Well, now we have suffered and are still suffering somewhat from this barbarian, Bolshevistic, red ideal. And in the public schools we have suffered a good deal. I say "suffered," that is merely a personal point of view. Some people have rejoiced in it; they haven't suffered any, but I am thinking about the children. I pity the children sometimes, not only in public schools, but in certain families. If I didn't know when I dropped that book whether it is going to hit the table or the ceiling, that wall, or Miss Scovel in the face, it would be an unfortunate world in which to live. I think we have to be thankful for the law of gravitation. It would be a rather chaotic world if we didn't have a natural law, and you couldn't tell what was going to happen.

It is a great misfortune where the children are brought up in a family where they can get anything by teasing, where they can fight one another all they please, where they can do exactly as they want to, go to bed whenever they feel like it, come in and go out as they please. They are on the road to misfortune and trouble; and when children are brought up in the public schools to think there is no law, no orderly arrangement, no good drawing, no perspective, no good color, they are to express their own fool selves and their own foolishness, we are headed for the worst that we have had yet in this country.

Now that may seem to you a little dogmatic, but I want you all, all you young people, to remember that I have lived through a good deal and I have a right to my opinion based on experience that is two or three times as long as the experience of anybody else in this room in the teaching of art in the public schools. Now this inundation of damn-worthy art (that is a new word I have invented; it isn't profane) damn-worthy art, I repeat, is beginning to dry up, I am very happy to say, and those of us who went to Europe to the Congress of Prague and saw the exhibits there and at Brno showing the ten years of progress of the Czecho Slovakia Republic, had a chance to see that the reaction has set in.

Now these Bolsheviks have some good ideas behind what they do. Think what a splendid thing it would be for the United States if their old, red, Bolshevik ideal in Russia, namely, that everybody must do something useful in the world, could prevail. And you know that some of the members of the royal family, the few that were left, had to tap shoes or learn to whittle a stick or do something that was useful under the Bolshevik regime, and all the parasites were omitted. Everybody had to do something useful for the common good. That is a good idea and so among these strong notions that have inundated the public school art and the other art in the country in the last few years there are good notions, some very good ideas underneath, but they will be of no value to us until they are properly absorbed, properly modified, brought into relation to the things that are eternally true, and when they are brought into relation to the eternal truth and laws of the world of beauty, then we shall have finer art than ever before, more vital, more dynamic and brilliant in color, richer, more convincing than anything we have had before.

Now this new art is beginning to appear in Europe and in America also. I want to show you some slides to convince you that what I say is true, and to quote scripture, "to stir up your pure minds by way of remembrance," I am going to show you the "damn-worthy" art through which we have lived.

You can see this dimly. The title is "Forces in Motion." That reminds me of a story about a negro who was rushing wildly down

the street, apparently crazy with fear, and somebody shouted to him, "Hello, where are you going?"

He says, "Good Lord, I ain't going nowhere; I'm just coming from somewheres." That is what that art is. They are just coming from somewheres. Away from perspective; away from design; away from rhythm; away from common sense. They don't know where they are going, haven't the slightest idea!

This one is the "Temptation of St. Anthony." See if you can find either the temptation or St. Anthony. As the boys would say, "What do you know about that!"

The next one is an angel. You will hardly believe it, but it is a German angel. I never saw a German angel, so I don't know how it looks, but that is an angel.

I am not going to give you the name of the artists, because you will forget them anyway, and I don't want to drag them in. The next one is "A Tennis Player." I don't know whether it is female champion or male champion, but that is "*The Tennis Player*."

This next one is "A Spanish Girl." I say a rather venerable girl. I don't see anything that is Spanish unless it is that piano up there in the corner.

Here is a portrait in bronze. That is by Matisse if you please, one of the famous ones. Well now, anybody who allows himself to be fooled by any sort of argument into believing that any of that art is worth mentioning as art seems to me to be lacking ordinary common sense. Of course, I may be wrong.

Now I have picked out to show you the best examples I could find of such art, not the worst—the *best* ones. Those slides came into the Museum collection of fine art. They are in there because they are fine art. I want you to know that I am fair with it, that represents the best there is. Well, now I said the reaction has set in and we found last summer that the center of interest in modern art, the center of activity, the most vital, wide-awake part of Europe is Czecho Slovakia. The next slide will show you where that country is located. This whale-shaped place in the middle of Europe with Brno here is Czecho Slovakia. Here is Prague, where we had the convention and here is Brno, where they held the exposition showing the progress made in Czecho Slovakia in the last ten years. See the relation of that country to the rest of Europe,—Hamburg here, Brussels here, London here and Paris here. It is in the middle of Europe. In that country there is at the present time the most alert citizenry of any country in Europe, the most enthusiastic, the most joyous, the most optimistic of any people in Europe, and all they ask is to be let alone and so do as they please. Now for this reason Czecho Slovakia held an exposition from which I have many illustrations which I am going

to show you. I have selected samples which are typical of the best being done in Europe.

We went over to the exposition at Brno and you can see that this was a popular exposition, and you can see also certain characteristics even here at the entrance that are dominant all through the new art. You will see that vertical horizontal lines are dominant in this view. There is hardly a curve visible except in the flags. Nature has not as yet given up the curve. Here are three of the buildings in this exposition, the first representing the city of Brno. Now you see that this architecture is vertical horizontal. Everything non-essential has been eliminated. There are no useless windows and no imitation windows on the outside. If they have a hallway and need light, they put in a circle and let the light in. Everything is reduced to the lowest terms from the point of view of the practical and beautiful.

In the fair ground they built a tower so that people could go to the top and see the whole layout of the exhibition because that is a very important part of the exhibition itself. See what a tower they built. There is a steel and concrete core. The tower is one hundred twenty feet high, with a staircase winding about so that those who wished could go to the top, but to protect them from the wind and weather they hung four windows of steel and glass from the top of the tower from the top plinth, as curtains, instead of building them up from below. The four glass walls are curtains hung from the top of the tower!

Then you will notice that the architecture is again all vertical horizontal. The old classic orders have disappeared. Nothing is used unless it needs to be used.

Here is the exhibition building. That is one corner of it and you see at the extreme right the shape of the arch that supports the roof. That whole exhibition building was planned to be an embodiment in three dimensions of the theory of the Czecho Slovakian government. You go first into a circular room in the center of which was a gigantic statue of Masaryk, the president for life, and from that central room radiated the departments of his government, so that you could follow the postal department down to the last activity; or the department of transportation to the last activity; or the department of education; and if the corridor on one floor wasn't enough, it was raised two or three stories or had wings out. All of the work in each department was shown in a place in right relation to all the rest.

Here was a building for the ministry of art. You see that everywhere the fundamental principle was the horizontal and vertical. The facade is in three great rectangles and in the middle of each is one piece of sculpture.

Here is the interior of one of those wings in the exhibition hall. Now because it was an exposition, the walls were just as simple and

unornamented as possible, to make a background for the things to be exhibited. There was absolutely no ornament of any kind in the interior of the exhibition hall except good proportion. You may call that ornament. The whole thing was background for the exhibition. That is what it ought to be, of course.

That is an exhibition of some of the industrial schools. I beg of you to notice there are no courses of study printed on big placards for people to read and copy. There are no explanations of any kind except a mere statement of what the exhibit represents. The things themselves are the exhibit, that is the fundamentally important thing. Now the next one will show you another exhibit from one of the grade schools. You see almost nothing here that you can read. You have to see the work. The thing is to be enjoyed through the eye primarily, not through the ear. Reading matter is just the extension of ear stuff. It is not eye stuff primarily.

This illustrates all the exhibits that were there. Whenever there was any printed matter they put a piece of tape from the word to the thing so that even if you were Slav, Spanish, or German, English, or anything else, you could understand it. The whole thing was the most obvious presentation I ever saw.

Here is the exhibit of one of the industrial schools. No course of study except as embodied in the work was shown. All the lines are vertical and horizontal. Here is the school for interior decoration, one of the state schools. The whole interior was decorated and designed by the students. No theory as to how it is done, but demonstration as to how it is done. That ceiling was made of cloth which the students wove, and on it was embroidered one of the most beautiful designs I have ever seen, a Japanese motif behind it. The whole interior was extremely beautiful in color.

Here is an exhibit of one of the Bohemian glass factories arranged so that the screen of glass received varying light from outside all day. They cut a hole somewhere in the roof of the place to let the sunlight follow along to form its part of the exhibit all day long. Constantly it changed the beauty and composition of it. You see how charmingly that is arranged, no crowding, everything in its place. The whole order is as usual vertical and horizontal.

Well now, the art in Europe at the present time is as advanced as that. That is, it is on its way back from the worst art that has been produced in architecture. Here is a piece of German architecture in Berlin, a department store. I would like you to think of the best department store in your town, the town you come from, and then think of this from the architectural point of view and from the point of view of the interior decorator. This is Wortheim's store in Berlin. Here is a nearer view. Isn't that beautiful? Even the smallest detail is in straight vertical and horizontal lines.

Here is the interior of the rug hall in the store. That is conventional oriental because the oriental product is displayed there. It has the quality of those over-ornamented, Moorish palaces such as the Alhambra and others. It is appropriate to the articles to be displayed.

Here is the hall in which dress goods in bulk are displayed and consequently the room is designed with big lines. See how it is illuminated. If it had an ugly chandelier it would change the whole effect of the room, like the chandeliers in some of the state buildings, in America. These lights are appropriate to the quality of goods represented and displayed in this room.

Here is a new room dealing with new goods—white goods and the little ready to wear things you know of, displayed in orderly fashion. Note how the vertical and horizontal lines predominate, as orderly and as beautiful in detail as you can imagine.

Here is some of the ornament in the entrance to the department where books are sold. Here you have literature; the musicians are represented going to Bremen, the donkey, the dog, the cat, etc. The whole decoration of the store is appropriate to the kind of goods sold in each particular department of the store.

Now, of course, that goes back to the old thoroughly defensible Gothic principles as you find them embodied in the cathedrals. The spirit of the past with the new, freer treatment. Here is the kind of Bolshevik art that was being produced in France a few years ago. Can you imagine what those are? Those are lighting fixtures. They are shades for electric lamps, made of thin slabs of alabaster, with gold and silver and platinum clasps, but that is a long way from anything rational, apparently in the way of lighting fixtures. Certainly a long way from any our ancestors would have considered rational. That was four years ago, nearly five years ago. Now here are some of the latest lighting fixtures. Up there in that metal fan little lights are hidden, and below is the thinnest plate of silver with peacocks upon it. That plate of silver catches the electric light and picks out the beauty of the decoration. In this, electric lights are put inside of the jar and shine through the jar, and that beautiful crestlike boquet, a cascade of jewels, catches the light and makes it very lovely.

Here is a wood carving that was displayed five years ago in Paris. Can you make out what that is at the top? That is a locomotive and an automobile racing with one another, apparently.

Can you tell what this is? A steamboat on this side and, well, what do you suppose that is? An airplane or a war chariot? Such design is like heaping toothpicks on a table.

Now in the German art at the present time they are improving upon that. Here are some carved panels from a modern German

hunting lodge. They are reminiscent of following the game. When you hurry through a wood you don't stop to see whether the briar that caught your knee is crooked or straight. You don't look here to see what kind of a tree this is, or where the limb that hit you in the fact is attached. You brush the things out of the way. You seem to go on through a lot of fragments, just those fragments that interfere with your progress. In this design there is an attempt to express that subjective quality. It is not a representation of the woods but a representation of the hunter's troubles. That is all right and the result is charming and new.

Now that is the direction in which the new art is headed, the more subjective note, not a representative of the external but the embodiment of a mood. That is the fundamental thing.

Here is a piece of furniture that is typical of the kind of furniture that is being produced now. You note the dominant decoration is the grain of the wood. The best furniture that is being made now and the best decorations are dependent for their beauty on what is often called "heaven-sent art," that is the natural beauty found in the grain of the wood. I wish I had the magic this minute to transport you to the great Terminal Tower and into the office of M. J. Van Sweringen and his brother, O. P. Van Sweringen, who are rearranging the whole of Cuyahoga County, and Ohio, and for that matter the whole of the eastern half of the United States. You will find their offices the most beautiful you ever saw in your life. They are finished in English Oak. The English Oak came over in one oak trunk sixteen feet long and seven feet in diameter and out of that one trunk they have secured all the wood to furnish that whole executive suite, and there isn't a single polished element in it. There is no glitter, no glare, no varnish, nothing of that sort. There is a soft and dull finish such as a piece of broadcloth has, but the grain of the wood is unspeakably beautiful. They have had the wood cut, split and opened like the wings of a butterfly. Every line of the cornice pattern, every bit of pattern in the panels is made from the beauty of the wood, just as in Santa Sophia the most wonderful church in the world, there isn't a bit of polished marble. It is just smooth marble. The whole interior has the texture of a kid glove and it is unspeakably beautiful.

The new art believes it is never right to destroy one beauty for the sake of an alleged other beauty. If there is beauty in the grain it should not be covered up with scrolled brass things. The beauty of the grain must not be destroyed. You see that in the furniture, the taking of the absolutely essential elements and the natural beauties instead of some hypothetical combination.

Here is a new German gravestone. It is odd, but it is like a great arrow pointing upward—the spirit has returned to God. You

see here—"Rest in peace" and here is the man's name. Here are religious symbols on each side. The whole thing has a roof on it protecting it from the weather. Isn't that sensible? Why should we always have ugly marble gravestones? I am amused when I think that there is not an art school in the United States that has a gravestone in its program as a subject for sculpture when that is the one absolutely sure sales field in sculpture. They make figures that nobody wants; they make designs for all sorts of things, except gravestones. I have tried to get it into my art school and I can't do it. The people seem to believe that if you make a gravestone you are likely to die the next minute. They are as superstitious about it as about making a will.

Here is something of the new jewelry. I have never seen more beautiful ice cream cones than these! Excellent in design and in craftsmanship, the result is fresh and charming. The fellow who designed it didn't stop thinking. The trouble with most of our designers is that they stop thinking too soon. They make a design for one panel of a window and then they multiply it. One capital is made and they reproduce it all around. Note each part here is individual. At the corner of East Fifty-fifth street and Euclid avenue we have a Pennsylvania station ornamented with the head of Mercury with a winged cap. That is a fine symbol for the Pennsylvania Railway, but when you see eleven heads of Mercury all alike on the same building you think he was mixed up with the Hybra! Mercury had but one head. The new art doesn't take a thing and repeat it indefinitely. The new art never stops thinking. Here you have things full of variety but all in harmony with the idea that is fundamental.

Here are some modern glasses. This is one of the loveliest things I have ever seen—lovely in color, with fish designed within the body of the glass.

In the realm of posters we are getting back to rationality, that is to a rational use of the erratic line. It is effective and doesn't insult your intelligence like the temptation of St. Anthony that we saw back there. Mr. Loesser said the other day—I was very much impressed with his address on modern music—when you go into a house you want to find a place to hang your hat at least! Well, a design like that gives something to get hold of. You can hang an idea on it.

Here is some of the new advertising. It is different. Nobody would have thought of that if there hadn't been Bolshevism in art. But this fellow is no Bolshevik. He knows proportions. Those cigarettes, "No. 111," were brought to the United States and rather than change the posters the importers hunted all through New York for an office at 111 somewhere! so the number of the office and the

name of the cigarette would be identical. The office is at 111 Broadway, ladies. I am not paid to advertise those cigarettes!

Here is another. Isn't that beautiful in proportion, in line, with slight modifications from the normal?

Here is a view of the exhibit of the city of Cleveland sent to the International Exposition at Prague. Everything was vertical and horizontal in harmony with everything else in the show. Of course, most of you know that out of the 4,000 delegates from twenty-four countries, the United States furnished 1,040 of them. There are plenty in the room who can substantiate the statement, that there wasn't a single exhibit at that exposition that attracted more attention than the exhibit from Cleveland. because of this orderly presentation of the interrelation of the work of the public schools and the Art Museum and the Art School.

Now, here is some of the modern sculpture. Did you ever see a cat more common-place and sad? Did you ever see a jay bird prouder of himself than that little one there? There is not a feather here, not a claw, hardly a beak, but the spirit which underlies each form is astonishingly well embodied with just enough detail to identify it and to make you think of each as a whole and that whole charged with spirit.

Look at this eagle. There is the finest eagle I have ever seen and one of the finest examples of modern art I saw anywhere in Europe. This bird was as big almost as you see him there on the screen. He was cast in bronze, the most terrible incarnation of swift and unescapable death, the spirit of the bird embodied in the simplest form, with not a single syllable added that was unnecessary.

Now of course there is sculpture like this. This young woman is reduced to factory construction like the buildings I showed you. She isn't beautiful. That isn't a bad face though. She is rather vigorous and athletic. I am not sure that corresponds with Lanier's description! He says something about "the firm sweet limbs of a girl." You may call that sweet but it is firm enough! It is reducing the body to the lowest terms.

Here is a composition in vertical and horizontal lines, one of the saddest things we ever saw, the bringing home in prehistoric times, to his cave or to his fire the dead chief with his mourning wife, with a boy not old enough to help and with the most dejected dog in the world. The more you look at that, the more oppressed you will be with the terrible calamity of the loss of the head of the family. These bodies show what it was like in the days when you couldn't have fish for lunch unless you went out and caught it, and you couldn't have venison unless you went out and killed a deer. Under such circumstances the family wasn't burdened with flesh.

Human bodies were reduced to lowest terms. Here is the new art, the spirit of the thing embodied.

Here is a dancer who is light on his feet. He is posed in such a way that his feet seem to be in the air. Here is another piece of modernistic sculpture that stimulated my imagination as much as anything I saw in Europe. The subject in the American slang, is the eternal triangle, but the French name for it is "The Affair." This man is talking to his wife over the telephone. His secretary is very busy on her conventional typewriter. I don't think I ever saw two figures so charged with anxiety as those two figures are. They are reduced to the lowest terms. Both are intensely alert and active and anxious.

Now look at that—the Crouching Beggar. What could be more convincing than that? The man has to beg and hates to do it. The man is hopeless but insists upon asking. The man has been starved because people disregard him. That couldn't have been made if it hadn't been for the modernistic movement, where things were reduced to such low terms that they were beneath comprehension. This convincing figure is reduced to inter-related plans that omit all detail and present vividly the essentials. The old eternal principles are sneaking back into modern art.

Now this slide shows where the exhibit of sculpture and painting was staged, the great hall where the art of Czecho Slovakia was shown. I want you to see how simple the arrangement of the whole thing was—vertical and horizontal spacing so that everything reposes. Here you see a few things placed where they would be most effective.

Now here is the illustration of the modern theory for reducing things to the lowest terms for children. Children aren't interested in perspective, primarily. They don't care whether a thing is properly constructed so long as it looks right. When they read a story they are not interested in the grammar and rhetoric. They don't note the arrangement of the syllables. They are interested in the story. Here is the sleigh and the calf, the tree, the sled and the bird of the story. It makes no difference whether the structure of your sleigh can be followed through logically or not. It looks to me as if the sleigh was made of pasteboard. Well, what of that? That isn't important from the children's point of view. Isn't that a nice little bird? And a lovely tree? That tree is big enough for the bird to sit on and you don't have to elaborate the tree. It has just a leaf or two. It is reduced to the lowest terms.

"The Sweet Shop," this is called. Study that a while and presently you will be thinking about the state of mind over there where children are so poor. It isn't the external. It is what is happening within that is important in modern art.

Some of you may have heard me quote perchance a sentence from Hegel—"Fine art is the free and adequate embodiment of the idea in a form peculiarly appropriate to the idea itself." That is a basic, fundamental definition of fine art, and it would be difficult for you to find any kind of fine art that doesn't conform to that. If that isn't art, what is it?

This is "The Nude at the Window" but a rather self-respecting, intelligent or intelligible nude compared with that "Temptation of St. Anthony." The coloring in that was marvelous. A perfectly gorgeous piece of harmonious coloring, but not so erratic as to be irrational—a type of the new art we are going to get.

This is a Czecho Slovakian girl earning her living selling papers I tell you that is the kind of girl the world needs if it is to come along. There is no boyish form here, no wilted figure, no drooping corners to her mouth, with a wilted cigarette. This is no modern American flapper. There is no hope in that direction. But this, I tell you, is splendid for a fifteen-year-old girl. You can't in the long run outwit nature, even if it is the style to try. You can't do it. Remember Burrows said, "Nobody can do anything against Nature because Nature is the only being in the world that can grow a tree, sit in one of the branches, saw off the limb herself between herself and the trunk and fall into her own lap." You can't outwit Nature.

Just look at this for a while—the "Lost Son" that at last has come back to poor old mother who has worked all her days to pay his gambling debts and to keep him out of jail. The boy is ashamed of himself to come home, a real husky fellow like that, to have a frail little woman like that take care of him. But look at the joy in that mother's face. That is vital. That is the new art. It embodies the idea.

This picture is entitled "My Wife." I didn't paint it! That girl doesn't look like an anemic! There is hope for the race in that girl! That is what the new art has helped to produce.

This next slide shows the girl who had a gift of a rare piece of Tiffany glass from her lover and who wonders whether she ought to accept it or not. Look at that. You can't tell which way the light comes. That isn't necessary. There is no light and no shade in that. The light and colors have been used to model that form and to give it volume. The work is in three dimensions, and the whole thing is as vivid as you look at it as anything you ever saw. Only in our day has that thing been possible. We were so pleased with it that I wrote a letter to the artist to tell him what an American thought of it. I had a very nice letter from him, a month afterwards, in which he said he was especially pleased to have that testimonial from some one in a land "which thinks young and fresh." I wish you had seen the color of that glass and of that orange through the iridescent glass.

The eyes, you notice, focus on nothing. If the eyes were focused on anything, she would be thinking of that thing. When they are focused on nothing, it denotes abstract thinking. Every touch in that picture embodies the idea.

Here is "The Family." That isn't the picture of any particular baby, of course. This isn't any particular man or any particular woman. You can't tell what sort of clothes they have on and you can't tell where they are except that they are in a world of some kind. But that interrelation in spirit, that complete union, that harmony between masculine and feminine is eternal. The little fellow has the strongest light on him, because all the hope of the future is in the child. The whole thing is modelled out of mystery, because what do we know about it all after all? The artist drew it in the form peculiarly appropriate to the subject with the hands of the father and mother protecting the baby.

Now here is a landscape picture. This was called "The Quiet of the Dawn." Isn't that quiet? Vertical and horizontal lines. The mood is in that. It isn't a photographic representation of the landscape but the mood of the early morning. Here is "The Coke Factory." Did you ever see such a tall chimney? It carries the fumes away, far away from the children who live in the vicinity. This is not the way they do it in Cleveland!

Next, "The Spirit of the Giants of the Rhur." That doesn't tell you what architecture it is, what it is built of. There isn't a detail there that you could lay your finger on. There is something here that may be a man, but what do you suppose that is? Did you ever see such an embodiment of gigantic machinery and supernatural power? That whole thing boils and smokes with modern energy; it is not the representation of a thing. It is the embodiment of an idea.

And there is a valley in the morning with the dew on the grass and the sun coming over the rocks. There is no danger of mixing up the rocks and trees, textures are perfectly differentiated. This is no gambling in art. This man has learned to draw and paint. There is no uncertainty about his landscape.

Here is a stone quarry. Isn't that about as bad a stone quarry as you can have? Isn't that vivid enough? It is perfectly consistent with the Czecho Slovakian country. You know what a country of contrasts it is. With bright yellow fields of grain, blue sky, dark evergreen trees, white houses, bright red roofs. There are sharp contrasts in that European country, and they are here in this picture. Such a picture couldn't have been done until after the Bolsheviks had murdered all the gray landscapes we used to have.

Isn't that imaginative? That is the golden evening in Eden. Eden, of course, that mystical, wonderful realm way back there, the

land of our dreams where everything was bigger and more beautiful and more wonderful, and the great trees were more than normal trees and had more dates than any trees ever bore before. That is back in the golden age when everything was perfect, according to our traditions. There was plenty for everybody. And here is a stork long before they built chimneys in the houses. And here are Adam and Eve and the first baby before there was any trouble in the family, and the whole thing is yellow and orange and rose. I wish you had seen that. That is art. That isn't an instantaneous photograph in your back yard. That is fine art.

Now there is a new thing. The wall of a precipice with its moving shadows. We wouldn't have thought of that if we hadn't had the noise and motion in that first slide I showed you. Here we have the elements organized with some reason. The result is beautiful.

"The Brook." When you look at that you see behind you all past geologic history. Subterranean forces, falling rain, running water, sunshine, ice and air have sculptured the earth into shape; those hills have been shaped by that brook in the last million years. And what a beautiful spring morning! Such grass, the meadow full of flowers, and the crystal clear water falling! That is the new landscape. We never would have had it if it hadn't been for the destructive work of the Bolsheviks.

Then the greatest art we saw in Europe last summer was made by Alfonse Mucha. He was in this country some years ago. A wealthy Czech in Chicago has paid his salary for the last eight years while he has been painting mural decorations giving the history of Czecho Slovakia from the time of its emergence from chaos down to the last year. There are ten great canvases averaging about twenty feet square now hanging in a vast hall. You see the relationship of one canvas to another. These canvases depicting the history of Czecho Slovakia are among the most beautiful mural decorations I have ever seen. There is but one mural decoration by a modern that might be placed higher than any of these, namely, the "Sacred Grove" by Chavannes in the Sorbonne, Paris. These decorations are thrilling. They are brilliant composition. Every detail is archeologically correct. Everything is perfectly drawn. Every one is charged with the sentiment of the time or the theme he depicts. I am sorry I haven't the whole series here.

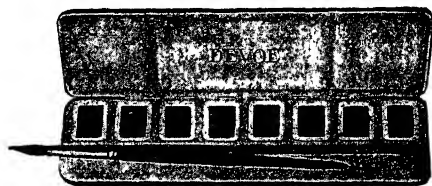
This slide shows John Haas preaching in Bethlehem Chapel. He was burned at the stake shortly after that. The queen is there and everybody is there listening to the fiery man preaching the New Testament gospel. Look at the drawing of that Gothic architecture. If you could see the original you would see what a marvelous decorative coloring the whole has. The Czecho Slovaks are building a magnificent hall in which these murals are to be permanently dis-

played for the education of the people. One of the Czechs said to me, "Mr. Bailey, that ought to be done in every country in the world. There ought to be found an artist in every country to take the spiritual history of the country as he sees it, to show what contribution it has made to the advancing life of humanity. He ought to devote himself to the national epic in this way for the instruction of all the people."

I wish we had someone who could do that and do it as Mucha has done it there. After you have seen that you want to walk down to the public square and see there in the place where Haas was burned a magnificent bronze monument to John Haas with an open Bible in his hand preaching to the people. The people are bowed down in tears and praying about him in the market place in Prague. That monument is the embodiment of an idea in a form peculiarly appropriate to the idea itself.

This is what is taking place in Europe at the present time and it is what is taking place in our country at the present time, and it is the thing you people more than anybody else in the world can influence in the right direction. See that your children do nothing that isn't charged with thought, charged with emotion, that isn't right according to the fundamental principles that always control the making of great art in every age. Thank you for your attention.

DEVOE



SCHOOL WATER COLORS

Tempera Colors
Art Lacquer

Enamelit
Artlac

Brushes
Drawing Ink

Poster and Show Card Colors

THE PRACTICAL PRODUCTS

Catalogues, Color Cards and Full Particulars on Request

MANUFACTURED BY

DEVOE & RAYNOLDS CO., Inc.

NEW YORK

CHICAGO

Selling Art Education To the Community

JAMES C. BOUDREAU

IT is indeed a pleasure to have the opportunity of reviewing in the presence of this gathering of fellow art educators some of the events that contributed to the delightful eight years I enjoyed as director of the art department in the Pittsburgh public schools. There are many avenues of approach to the subject, "Popularizing Art Education," that suggest themselves out of my Pittsburgh experiences. From them I have chosen the keynote, "Selling:" (1) Selling ourselves, (2) Selling our co-workers, (3) Selling our clients.

A sales organization must know its product, must believe in it, and must be able to discuss and demonstrate it. These requisites were realized through the following procedure. Special committees presented organized material for larger group discussions which finally led to an agreement within the art teaching staff upon the basic principles of our product—Art Education. Our platform finally contained five planks; objectives, as they are better known in our professional language. They are: We develop in all the children;

(1) Success in judging, selecting and arranging many things as consumers according to the principles of art.

(2) Intensified aesthetic appreciation in viewing nature and works of man evidencing qualities of beauty.

(3) Skill and mastery in planning, constructing and decorating many things embodying art qualities.

(4) Ease and expressiveness in presenting many ideas and representing a great variety of things employing different art modes.

We develop in the talented child:

(5) Intelligence in selecting from the several phases of the vocational field of art the one to which he or she is most naturally adapted.

In the many discussions of our platform we early learned that a statement of these five objectives required, for a thorough understanding, a recognition of their varying significance from grade to grade. A consensus of opinion established these variations, thus making it possible to present them by means of a diagramic chart, simply and forcefully.

Finally, feeling confident that we knew our product, believed in it, and were able to discuss and demonstrate it, we addressed ourselves to the second assignment, "our co-workers;" the remaining members of the Pittsburgh public school educational corps. The art teachers, supervisors and director found many opportunities in which to present to their fellow educators their special product, "Art Education."

Luncheon gatherings, faculty meetings, and the superintendent's staff conferences were among these opportunities.

The International art exhibit held annually in the fine arts department of the Carnegie Institute offered an excellent opportunity for the members of the art department to demonstrate to their co-workers the second objective, aesthetic appreciation. Several of the art teachers and supervisors served yearly as docents for their school faculty. The director was fortunate in being invited to interpret the paintings for many of the elementary and high school teacher groups. Leadership of the annual pilgrimage of the superintendent's staff and principals proved to be one of the outstanding inspirations and pleasures experienced by the head of the art department.

The third selling assignment, "our clients," the public, presented an inexhaustible territory, rich in opportunity, that was eager for our product. The title of our sales talk that proved most popular with our clients was "The Functional Value of Art Education in the Pittsburgh Public Schools." Among the groups addressed by the art corps were parent teacher associations, women's clubs and business men's service clubs. We were ever welcome to suggest and present special art programs for these organizations. Here, also, were golden opportunities for interpreting the International exhibitions. As many as sixty clubs were escorted through the galleries annually by the various public school art educators.

A discussion of our program for talented art pupils always won popular support for art education. An exposition of the "cumulative record card" with its final climax of placement in the professional field of art elicited unqualified approval. Tangible results appealed to all, especially the business man.

Probably no single activity proved as valuable a sales medium for our product "Art Education" as the weekly insertion in the local press of a reproduction and discussion of some example of Pittsburgh's beautiful architecture. While this series was developed primarily to present to fifty thousand school children accumulative material at small cost for their appreciation of architecture, it early developed into an appreciation course for the general public. This unexpected reaction contributed vitally to the popularization of art education locally.

More phases of the Pittsburgh program could be presented, yet these few should suffice to point out the basic idea upon which it was developed, namely: "a thorough understanding of our problem, art education, continuously being presented in school and out through the concerted action of the entire staff."

Specific Values To Be Obtained From Some Definite Projects Properly Motivated

HARRIET ESTELLE HAYDEN

Director of Art Public Schools, Des Moines, Iowa

ONE of the most difficult problems with which the art supervisor has to cope is the teacher whose pupils turn out beautiful finished products, but miss the great wealth of educational values with which the problem is endowed and which should be obtained from it. To open up this world of possibilities to the teacher and make her conscious of them is the business of the supervisor and the training school.

Education has always been impelled by aims and objectives. These change and become outgrown with the change in and development of the world, but always behind education is the great purpose of making useful citizens and making them happy, people who can work together and produce a world which is good to live in.

Reading was originally taught in order to enable people to read their own bibles and letters, but reading has now, besides the thought of skill, that of opening up to boys and girls a whole world of joy and inspiration in introducing them to the best in literature and through developing in them a love of good reading.

For many years art was taught, and still is in some communities, with technical skill in drawing and painting and designing, the skill required by the artist, as its end and aim. The work was, to a large extent, dictated and bore little or no relation to the immediate interests of children. These courses have broadened and been enriched and now include besides drawing and painting, lettering, color study, many crafts and construction in many media. They include a full subject matter content, acquaintance with the great art of the world as seen in painting, architecture and sculpture, as well as the minor arts of pottery, textiles, etc. Today our aim is to give a basis for the appreciation of beauty and to develop creative ability with skill as a secondary interest.

To the psychologists and other educators in the progressive and experimental schools we are indebted for their scientific investigations and analyses of aims, objectives and methods. The results of their research have been most helpful in aiding us to solve our problems with least friction. Education always has been an art, but during the past century and particularly in the last decade it has developed into a science as well.

The aim of education today is not the collection of a certain number of isolated facts, valuable though they may be, in the various

subjects, nor the development of unrelated skills. Some of the more venturesome report cards totally ignore art as art and arithmetic as arithmetic, but attempt to inform parents of the general development of the child, his strength and his weakness and whither he is bound.

In setting up an educational project many things must be considered, if the project is to yield to the child all of its possible values.

For years we have been familiar with the five general aims toward which education should contribute; health, turning out boys and girls with healthy minds and bodies; citizenship, the development of good, useful, loyal citizens; economic independence, boys and girls who can support themselves and can also appreciate the work of others; aesthetic appreciation, boys and girls who know and appreciate the beauty of the world; and the use of leisure time worthily and well. One or more of these every project should attempt to meet.

May I diverge here to say that there seems to be considerable misunderstanding regarding the use of poster making and of posters in relation to the development of health habits. I do not believe that such habits are formed nor strengthened through the making of posters. The legitimate use of a poster is to advertise—to bring information in graphic form before people—to call attention to facts. If it is made for that purpose all well and good, but if it is made for the purpose of spreading information among the poster makers and in developing in them health habits, it would seem to prostitute its purpose and to fail to accomplish its aim.

In schools there are enough legitimate opportunities for making posters that are to be used so that it is not necessary to try to develop health habits in such an unnatural way as the making of posters. The school play must be advertised, signs must be made for the lunch rooms and other places about the building and in the community. The development of health habits can be accomplished much more effectively through bringing about an interest in their observance through talks, discussions and the practice of health habits. If the poster can assist in this, just to that extent it is effective.

A rounded education should also include the development of certain important abilities, good habits of thinking and doing, certain useful skills, the development of sound powers of judgment and the enjoyment and appreciation of good literature, beautiful music and the great art of the world as well as of the natural beauty which surrounds them.

Work in art classes is peculiarly suited to the satisfaction of certain normal impulses such as the impulse to manipulate, to investigate, to create and enjoy beauty, to construct and to invent and to enter into social relations with others. The satisfaction of these impulses gives boys and girls much joy. All of this should be in the mind of the teacher and be used to advantage as the project develops.

May I tell you of some specific projects which have recently been successfully carried out in Des Moines? In the 1b grade the work centers about the home, its interests and activities. In 1a we go out into the community which serves the home, the stores, the fire stations, the farm, etc. A 1b class was invited to visit a farm. For days before the anticipation was keen and the promised pleasure became the chief topic of conversation before the mothers came in cars to take them to the farm. They brought pictures of farm animals and told of what was done on grandfather's farm, and made many happy plans for the trip.

Arrived at the farm, they fed the chickens and pigs, saw the cow milked, rode on the back of old Dobbin, picked up early apples, climbed the apple tree, and gathered a wealth of material to be poured out in various forms of expression upon their return.

When the visit was planned the teacher had in her mind and no doubt on paper a list of values which she hoped to realize from the trip, social values, courtesy to one another, to mothers and to their host, economic information as to the source of the products of the farm and the labor involved in producing food, some health information, joy in expression through drawing and construction, acquaintance with good reproductions and many other values too numerous to mention.

Upon their return to the school they told the story of the visit in various ways, there was no lack of subject matter for illustration and the farm which they constructed bore evidence of accurate observation and careful planning.

One day as I was driving by one of our small parks, I saw a band of Indian children in Indian costumes, blankets and head dresses. Some of the boys carried bows and arrows. Others were seated about a fire. Some of the girls were weaving, others making pottery. A large tepee beautifully and accurately decorated with Indian symbols was erected and upon a rack, near by, hung meat and corn drying.

Something in the painted faces seemed familiar, so I went in to see what it was all about. The chief approached and bade me welcome and others of the tribe gave evidence of a friendly spirit, indeed, by giving me of their food, dried beef, parched corn and corn bread. They interpreted for me the symbolic designs upon the tepee and upon their head bands and blankets.

This third grade project brought about a deeper understanding of the significance of the activities of the Indian, how he provides himself with food, shelter and clothing, some understanding of his spiritual life and it gave a world of interest in symbolic and creative design. New curtains decorated with designs inspired by Indian motives were made for the room, a large rug was woven by a group of girls, pottery was made and decorated and the project inspired much excel-

lent illustration. It satisfied all of the impulses and enlarged the background for reading. The children were lead to use books as reference material in preparing for the picnic and the entire project was rich in thought content.

One day in early spring, one of the schools located in a very poor district suddenly became infested with bandits. The boys all came with red bandannas about their necks and minds attuned to violence. Something had to be done to save the nation and that quickly. Fortunately, a clever well-trained teacher was in charge. Did she take off the handkerchiefs and tell them to settle down and be gentlemen? Not she! She thought quickly and well. This was a fifth grade. She told them stories of life in the lumber camps among rough, strong, heroic men who through hand work were providing the world with lumber for our furniture and our houses. She introduced them to excellent reproductions of pictures of great forests and to different types of trees. In less time than it takes to tell it the entire class was turned unto a lumber camp.

They gave a play. An old blackboard was painted to furnish the back drop of the stage. The play inspired a book of most interesting illustrations showing the various members of the lumber camp at work, the cook before his kitchen shack, the sawyers at work and the lumber jacks guiding the rafts down the river to the mill. A sand table illustration was made showing all the activities of the camp. Men and animals were modeled and painted. One of the most charming and life-like figures was that of a man sitting on the trunk of a fallen tree with his dinner pail beside him and a sandwich in his hand. The project, while controlled was self-motivated and held the interest of the class for days. Interest was satisfied and developed through contact with one of the great industries of the world.

One of the most successful projects and one into which all of the departments of the school were ultimately drawn was carried out in a seventh grade. This is how it came about. One of the boys brought to school a very fine ship model which his father had made. The class was enchanted and talked about it for days. The boy who brought it asked the art teacher if he could not make one himself and if she would help him with it. She would. That fired the entire class with ambition to make a ship model. Everybody wanted one. Miss Sherwood consented on condition that no two were alike.

They listed and collected pictures of as many kinds of ships as they could get. Greek ships, Viking ships, Spanish galleons, the Mayflower, Revenue cutters and even a model of the latest airplane carrier with magnets set under the top deck to slow the speed of the aeroplanes when they light. Each member of the class selected a type of ship and made it a point to find out all he could about its function and construction.

Line and color harmony were carefully considered and plans drawn for the blue prints. Blue prints were made for a few and the class learned to read them. You may think of this as a manual training problem and it might be. Learning does not seem to fit into compartments. When these ships were about half finished I visited the school and this is what I saw. The class came in and took their seats. The teacher said "get your work." They flew to different parts of the room and took from cupboards and shelves each his own treasure. Back at work immediately it was not necessary for the teacher to say "John, get to work." They were at work. Interest was high. A hum of conversation was not a disorderly noise but rather a busy one. Questions were asked, some were answered and others were referred to books for information. It was not considered a disgrace for the teacher to say, "I do not know." She frequently said, "I do not know, but you will probably be able to find out by looking in this book," or "ask your history teacher, she may be able to refer you to the right book."

Interest carried over into other classes and a play was written. With the help of the music teacher songs were written and set to music and put into the play. Songs of the sea and sea poems were learned and finally when the ships were all finished the class decided to ask fathers and mothers in to see the play and rejoice in the launching of the ships.

The stage was set as the deck of a pirate vessel, piled high with boxes and upon which the marks of bloody hands were evident. The back drop was a large white sheet tie dyed to look like waves. A parrot was borrowed for the occasion, but had to be removed in the middle of the play as he offered too much competition.

At the close of the play after the poems were read and the songs all sung one of the boys told of the inception of the project, its joys and its disappointments, and then several of the boys and girls told each in turn of incidents in the building of his or her ship. At the close the entire class went to the windows where the finished ships were and took them to the stage where they were shown in the final pageant.

The values of this project are, I am sure, obvious, several of the great goals of education were met, specific art aims were fulfilled, the impulses to manipulate, to create, to investigate, to create beauty and to work together in a social group. All these were satisfied. One day while visiting the class, I asked them what they were getting out of the work. They immediately tried to justify the time spent by telling me of all they had learned regarding transportation, kinds of ships and all the rest. But I was not satisfied and finally asked them if they had learned anything that had nothing to do with ships, transportation or art and they were stumped. Finally, one boy said, shyly,

"Well, I learned that we have no time for the fellow that fools around and does not work. He just bothers the rest of us." Another said "I learned that we can work better if we help one another." "What do you mean? Illustrate." "Well, said he, "Ileen liked the height of my mast so I let her measure it. But she had a very nice color on her sail that I could not seem to get and she showed me what she mixed to get it."

It is through projects such as these and the problems which they bring out that art becomes an integral part of learning. It helps to clarify thinking and fix images through making concrete the academic subject matter. It meets the large educational goals. It satisfies the normal impulses to manipulate, to investigate and to do research work, to construct, to create and invent and to create and enjoy beauty. In the hands of the well-trained and wise teacher it is not a frill, but takes its place naturally as an important and joyous part of living.

Decorative maps are at present holding the interest of many schools and offer infinite opportunity for educational development. Research is encouraged, aesthetic appreciation fostered, techniques developed, thinking clarified and knowledge fixed through the working out of a beautiful wall hanging with which to decorate a geography or history room. Here is one toward which forty-two sixth grade children contributed.



Merchandising Color

HENRIETTA MURDOCK

Director of The Upton Studio of Decoration and Color
Lockport, New York.

THERE is a reason for the present wave of color. We may well believe that it is not a fad beginning last year and continuing this year and next.

You have perhaps wondered where it came from, how long it will continue and if your taste is going to be affected by it. All of these questions are becoming more vital daily, for we have every reason to believe that something has happened to cause all of the red tractors and blue nutmeg graters.

Indeed, the application of color to commercial articles is becoming so diversified that it affects practically every class and type of individual living in this country. Even the very young buy today and the color appeal is strong among this class of purchasers. It always is easy to sell new color, and increasingly difficult to merchandise old color. An old color sometimes becomes new by being used in a new way. If we have never seen a wine-colored egg beater handle, the

chances are that we will be refreshed by its novelty, whereas a wine-colored dress would not stir us at all.

The buying public will profit greatly by learning a little about color. Manufacturers also must give serious consideration to the psychology of color if they are to produce the things this new public will buy. All of this is a tremendous undertaking since there is no precedent by which he may be guided.

Looking back over the history of art and decoration one finds that there have been previous waves of color very similar to the present one. These former waves of color have lasted from 200 to 600 years! This leads us to believe that this new use of color applied in a decorative way to utilitarian things will last longer than this generation or the next or the next.

In other centuries these waves of color have come about in the same way—through the development of a leisure class following a period of prosperity. People who have been too busy to develop the aesthetic side of life suddenly find themselves with ample means and leisure, but no cultural education. All at once, they want to know something of opera, of painting, of literature, and as a result of this desire for culture, express themselves eventually by becoming genuine patrons of the arts.

Such classes have developed in Europe from time to time with the result that there have been brilliant periods when art development reached glorious heights. There have also been subsequent declines with the art of a whole nation decadent, but always these brilliant periods have left behind wonderful and memorable accomplishments.

In America we are only beginning to have a leisure class. Retiring magnates, captains of industry, financiers and others are forming the background against which this new art is being established. If the precedent established in other centuries holds true, we are going to have a long, long chance to make our contribution to this Renaissance before its inevitable decline.

So far the psychology of color has not become a serious manufacturing problem. In a few months the chances are that manufacturers will begin to feel reaction from it. This is because the deep and interesting study of color has its psychological bearing upon savage and civilized persons alike, and complete knowledge of its handling will be required of those who undertake to profit by it commercially.

For those who have technical knowledge of color and have studied the reaction of individuals to it, much valuable information is available for the manufacturer. To him blue is not just blue, but gray-blue—a blue that is green enough to be cool, or red enough to be warm. He knows what colors to adapt to the decoration of certain articles so that the idea of suggestion will work its magic. He knows why a garden trowel should be red instead of blue and a refrigerator pale green instead of orchid.

Manufacturers are concerned about this new craze for color. There is no precedent to guide them as manufacturers, for there has never been a nation so great as ours with manufacturing interests so diversified. We must create art in industry because there has never been another age when industrial interests were as great as now.

A generation ago quality was the most desirable attribute of any article to be purchased. If one received full value in quality, appearance did not matter tremendously; color not at all. A garment might be drab, slate gray, muddy brown—it did not matter so that the cloth was good in quality and worth the money paid for it.

Today when a woman enters a shop for the purpose of purchasing a dress and hat, she is very likely to say, "I should like to see a blue chiffon dress," or "will you show me a red hat?" Color seems to be so strong a selling point that almost any article purchased by the public is given a color designation.

Of course, when manufacturers know how to handle color to its best advantage, it will doubtless prove of greater value to them than at the present time.

It is interesting to notice how great a part color plays in the manufacture of automobiles. Only a few years back, performance was the deciding factor in the purchase of a car. One of the greatest manufacturers of them all said that the appearance of a car was a negligible factor. If an automobile gave good mechanical performance, continued service and required little upkeep, the public would ask for nothing further. Of course, this seems almost ridiculous to us now with beauty of line and appropriate color being so closely associated with the make of car itself that sometimes engine performance is almost forgotten.

On first thought it would seem that favorite colors mean so much to an individual that everything would have to be made in every tone in order to supply the right appeal. But psychologists have found that as a rule people of different ages enjoy the same favorite colors.

The very young prefer red. Boys between the ages of twelve and fifteen like a very pale, delicate blue; at eighteen they like dark blue and brown, and at thirty soft tints of colors please them most. At forty years of age comes a preference for the violet tones which by the way, shows the highest development of any color sense. During middle age, violet tones continue to be favorites, the tint known as red-violet showing the very highest development of all color appreciation.

As you will observe, this tint of red-violet is practically nonexistent commercially in America. It is appreciated by so few people that it does not pay to manufacture articles in it. Most foreigners, however, appreciate the red-violet hues and use them generously.

After middle age the taste for color declines in very much the

same order in which it rose, until the old man of ninety again enjoys red more than any other color.

With women, color development is a little different. Girls of twelve and fifteen like orange; those of eighteen show preference for a rich, coral pink; women of thirty like gray-blue and sage-green; the violet shades are most appreciated through middle life and in the declining years little favoritism is shown, but there is an inclination to respond to those colors which were the favorites when these women were little girls ten years of age.

The same thing is true of a cycle of color development which covers generations. As you have observed, the first tones appearing in this new color wave have been crude and usually of full intensity—bright red, brilliant green, intense blue and strong yellow. You have perhaps also noticed the absence of any violet-toned articles. For a long, long time people will continue to buy colors in full intensity when they are applied only to those articles which have never before appeared in color. There may be later stages when softer tones have appeal, but not for a considerable time to come.

The present success of brilliant colors on bicycles, garden tools and other articles of a similar kind is due to the fact that—it is new! People see the colored articles for the first time with the same excitement they experience in reading news headlines. They are likely to meet other people and remark, "Well, well! I just saw a bright red coffee pot down at Wilcox Brothers! What do you think of that?" "Yes, everything's colored nowadays—blue stoves, yellow bread boxes, green ice cream freezers. Everything! My boy has just bought a blue bicycle."

A fresh use of color pleases most people tremendously. There is a new thrill to buying a lawn mower with a red handle and yellow wheels. You see, almost everyone loves to make a color selection. It is perhaps an unconscious urge, but when variety of color is shown in any article to be purchased, few people buy without making a selection from the standpoint of color. Whether it comes from being something one has never done before, or the play element of this new contact with color, the fact remains that there is stimulation in buying as a result.

It will be necessary to watch two things in commercializing color for utilitarian purposes for certainly it will be disastrous to get ahead of the development as a whole.

Too soon some ambitious person will decide that the colors on the product he is using are too bright and he will decide to turn all his reds, blues and yellows to tints. He displays these articles, but they are not well met by the trade. The fact is that the buying public is not ready for tints in that particular article. For a long, long time people are going to continue to buy colors in full intensity because

they have not reached that stage of their color development when the more subtle tones appeal to them.

The second thing to consider is the suitability of any color to the purpose for which it is to be used. This is where tints come into their own, for we are a little further along in the stage of color application to ornamental things than we are in color as applied to utilitarian things such as kitchen stoves, lawn mowers, bicycles, sinks and so forth.

Soft tints of color are preferred for interior furnishings because color has so long been used for this purpose that its present development is far in advance of color for the decorating of utensils, tools and so forth.

Color has been used on walls for many centuries. It therefore has developed to that stage where people either like tints or soft tones of stronger colors for wall decoration. It almost never happens that crude, intense colors are put on interior walls.

Floor coverings have run a complete cycle—and we find the most beautiful rugs in those Oriental countries where color appreciation has followed centuries of selective taste.

Color associations are important because their effect is usually unconscious. Cool green is an excellent color to associate with food. It makes us sense cleanliness, freshness, and coolness. For this reason kitchen walls, refrigerators, and glass plates colored a fresh, delicate green, give food twice the appeal it would have against a plum colored background.

A storekeeper displayed for sale two lots of garden weeder. One had a little splash of green paint on the back and the other had brilliant red paint. It was observed that those with the red paint were sold out before any choice whatever was made from those with the green paint. Two reasons may have been responsible for this: One was that ever-present personal desire to have plenty of color if you are going to have it at all, and also there may have run in the customer's mind the fact that he would be able to find this special tool readily if he left it lying around the garden somewhere. Undoubtedly, that splash of suitable color sold the merchandise.

The probable age of a class of purchasers for a certain article will also have some bearing. This will not make so much difference, however, as the suitability of color to the character of the article. Strongly constructed outdoor implements of all kinds should carry their spot of color in full intensity, for men are going to buy them and they still respond to that dash of brilliant color, and also there is an unconsciousness association of strength contributed by this color to the article it adorns. A pale blue hoe would not appear one-half so strong an implement as a black and scarlet hoe, though they might be constructed of identical materials.

Two or three valuable conclusions result from a survey of color. One is that it is going to last in all probability, much longer than the present generation. Another is that tints belong to those colors which are to be used indoors and which will be purchased probably by women between the ages of twenty-five and fifty. The exceptions to this last are utensils which have only just begun their color cycle.

The wise person will make an honest effort to gain a little real knowledge of color, for the chances are that he will be seeing plenty of it for some time to come. If anybody remarks that color has seen its day and will soon retire, leaving us the good old drabs and browns, tell him of those other centuries of color development and incidentally remind him of King Tut's blue chariot and Columbus' scarlet coat.



Art Principles Applied To Everyday Life

LUCY WARD

East Technical High School, Cleveland, Ohio

THE subject for discussion this afternoon is a very delightful one in the admission that the home economics teachers still believe there are art principles and that they may be used in every day life. I am going to show you briefly through slides and concrete examples how these principles are being used in dress, the home and business. Before doing this I should like to review briefly, as a basis for discussion, what these principles are.

- One of Webster's definitions of principle is "A general or settled rule or ground of action; a governing law of conduct." Both statements involve action, with some definite aim or purpose behind the action. Every-day-life is largely made up of *two actions*—selecting and arranging materials and objects. If we have *formed the habit* of thinking in terms of suitability or fitness to purpose and right relationships, we are using art principles in every-day life. In Emerson's poem, "Each and All," he says:

"All are needed by each one
Nothing is fair or good alone."

This truth used as a basis of right selection will result in harmonious relationships in materials, shapes and colors. In addition to these two principles of selection, there are the several qualities of good arrangement of materials and colors; unity, variety, balance, rhythm and subordination to a centre of interest—all of which are important factors.

The costumes worn by the 10A girls who are with me today have been worked out by them with these factors in mind. Most of them started with an accepted limitation such as a last year's coat or dress around which the ensemble has been worked out. Most of the hats were made by the girls in their millinery classes, having been designed beforehand in the art classes. The girls were greatly stimulated by three complete twenty-five dollar outfits, selected in the basement of one of our big stores and loaned to us for a couple of days.

SHOWING OF COSTUMES

John Cotton Dana says in a recent number of *Forbes Magazine*: "After looking at a number of recent department store exhibits of modern decorative art and art in industry, the fact is borne home to me that the American bathroom and kitchen are far in the lead in the search for a style suited to our age, our living problems and our methods of production. And so I would say to the artist, the designer, and the manufacturer concerned with art in industry, 'go to the kitchen and the bathroom, young man. Study the beautiful lines of American bathtubs, plumbing fixtures and the modern electrical refrigerators if you want to see beauty wedded to utility.'" I should like to add to this—study the improved lines of automobiles and the beautiful color harmonies which dash about our streets these days. Mr. Ford did not realize what has been happening in America when he made the statement a few years ago, that he would not give two cents for all the art the world had produced. The *New Republic* made the comment that one needed but a glance at the Ford car to believe it. The Chevrolet Company awoke to the fact that when mechanical efficiency had been attained, beautiful design and color would be demanded by the public and, for a while, Mr. Ford had to take a back seat. If you are interested in what is happening along art lines in the business world today, you will find it in an article in the *Atlantic Monthly* for August 1927, entitled "Beauty, the New Business Tool."

Now I have a few slides to show you which will illustrate the use of art principles in the home.

The house and grounds shown were made in miniature by a group of third year high school boys specializing in architectural drawing. The miniature dining room was made by a group of high school girls. The other slides were made by the Art Museum to fill the need of examples of small, livable and artistic room.

Art Appreciation Developed Through Home Economics

FRANCES KING DOLLEY

Western Reserve University, Cleveland, Ohio

A RECENT writer on "Public Interest in Art" has said, "Art, in its truest sense, has come to this country as something belonging to the day and the hour and to all the people."

With increased leisure and increased opportunity has come a greater realization of the contribution which art makes to the community and to the individual—a thing essential to the joy of life.

There are many agencies besides the art museum, art schools, art courses in colleges and public schools which have helped to promote this awakening to art in our communities. The theatre, studios, shop windows and colored advertisements have had a subtle but effective influence. The daily newspaper, magazine articles and radio talks have helped to set up standards of taste and finally the Allied Arts Extension is about to start its work of carrying exhibits of fine arts and other artistic exhibitions to the remote districts of the country.

What has been the contribution of the home economics teachers? What is to be their contribution in the future?

Heretofore it has been for the most part "Applied Art" in clothing and house furnishing problems, with the result of having awakened an interest in color and design in a group of students who, perhaps, had no marked ability or natural talent for the fine arts. The development of art appreciation, aside from developing the taste of the students for more artistic clothing and home furnishings, has not usually been a conscious aim of the household arts teacher.

However, today we are realizing that the interest in design and color in the concrete problem of garment or room may be carried on into a larger field for the purpose of sensitizing the mind to greater delight in the beauty of line and color wherever found.

I have been asked to tell you in particular of what the home economics department of Western Reserve University is doing in the training of students for enjoyment of the beautiful.

We realize that the art principles upon which art appreciation is founded must have a wider application and be more frequently discussed than is possible when applied merely to laboratory problems in clothing. We believe that the making of many choices is an important factor in learning to discriminate between what is well done, less well done or altogether inartistic.

Many people instinctively enjoy color but must be trained to see and feel the subtle beauty of proportion, balance and rhythm of line.

aying of the silver, the placing of flowers and candles may be taught as a lesson in line, rhythm, proportion and balance as well as making it a lesson in color combinations. These illustrations may be used in clothing classes after illustrations of the same principles have been shown in the decorative design of a dress, thus giving repetition of the principles without monotony of illustrations.

History of costume is another phase of our work which affords opportunity for developing new interests and appreciation. We study the development of costume not alone to find how fashion has been influenced, but to apply art principles to the costume and discriminate between the artistic and the inartistic and to discover why certain styles have been recurrent. We also look to the art of each age and see what influence it has had upon costume. The relation between the architecture and the costumes of the different periods always awakens a new interest in the student.

The students also collect pictures to illustrate shape and color harmony. This gives them exercise in making choices and these pictures are used in class as illustrative material.

A test of their power to appreciate the artistic in clothing is given in the laboratory. Each garment that is made is worn before the class and judged from the artistic point of view as well as for technique. Whenever constructive criticism is given, all possible alterations are made and the garment is again judged.

Another laboratory test is for matching color and making color combinations. We use the medium of dyes for most of our color work.

As I said earlier, the final test of the student's grasp of these principles is given at the art museum by asking him to analyze various works of art. This lesson always arouses enthusiasm on the part of the students, some of whom frankly say they never before had really enjoyed the museum, and we know that many of them continue to go again and again of their own accord.

These are some of the ways in which we repeat over and over, from a different view point, the principles upon which art appreciation is founded with the hope that the student may not only learn to see the beautiful, but may learn to feel an emotion as well.

In closing I should like to give a couple of quotations which embody the aim which we hold for our work in art appreciation.

"The appreciation of a work of art consists finally in opening the mind and the heart to receive the impression which it conveys and to receive as well a finer sensitiveness to similar impressions."

"Though we travel the world over to find the beautiful, we must carry it with us, or we find it not."

The Art of Attractive Personal Appearance

ETHELYN BOBENMEYER

Longwood Commercial High School

MY talk will not be strictly confined to the subject as printed on the program because I have been requested to describe the personal regimen course as well as to show its correlation to the art of an attractive personal appearance.

Longwood school is a commercial high school and practically all of our students enter the business world or retail store work immediately after graduation. Our vocational advisor found that it was impossible to place a large group of our graduates because of their personal appearance and ignorance of rules of business etiquette. It was suggested that a course of some kind be given to senior girls which would develop an appreciation of the relation of proper clothing to personal appearance, suitability, cost and health.

Personal regimen is a credit elective course which meets daily. It is especially open to 12A girls, although girls of lower ranks are permitted to enroll if they have conflicts and cannot elect it in their senior year. An attempt is made by the vocational advisor and home room teachers to enroll girls in personal regimen who are in great need of improving their personal appearance, or who may not have had advantages of a desirable home training. We feel that a course of this kind should be given to all students, boys as well as girls, especially those who will have to leave school before graduation. We expect to make the course a requirement next year.

Girls taking personal regimen are expected to set an example for the whole school in appearance and behavior. The senior personal regimen girls are given many opportunities during their last semester to try out at parties and informals the things they have learned in class. A committee is chosen from the personal regimen classes to select a dress for graduation, as it is customary for the seniors to wear uniform dresses. Great care and deliberation are taken in making this selection and the girls have never failed to make a wise choice.

Major Objectives

To develop an appreciation for higher standards of living by consideration of the value of personal appearance, health, wise use of leisure time, and money and relationships to home, friends, business and community.

Specific Aims

1. To improve the personal appearance of Longwood girls so

that they may go out into the business world knowing how to make the most of themselves.

2. To teach the value of good health in this connection.
3. To show that success depends largely on the ability to adjust one's self to new conditions.
4. To show the value of developing personality and the art of being agreeable.

The thing upon which we spend the most time and which we are continually stressing is personal appearance, because we feel that our students as a whole need that more than anything else. After we have discussed all of the things which go to make up an attractive personal appearance, we grade each student, using our personal appearance score card. First, the class as a whole criticizes any one who volunteers and the criticisms are all given in a friendly but helpful manner. Because of our lack of time to grade each one individually before the class, we then divide into groups and grade each other. After this is completed I collect the cards and write a little note on each card and return it to the proper girl. This is done three times a semester and there is ample opportunity to notice improvements.

Whenever possible we try to work with the art department when discussing line and color. Each semester one of the art teachers gives us a talk on color and later, with her assistance, we arrange a style show to show appropriate styles and colors for various types of girls.

Following is an outline of the content of the course.

Content

1. Appearing to advantage.
2. Selection and supervision of one's clothes.
3. Food facts for the individual.
4. Earning and spending.
5. Living away from home.
6. Health as an asset.
7. Individual housekeeping obligations.
8. Making the most of one's self.
9. Entering the business world.

Method of Procedure

The topical method is employed in personal regimen. Each subject is discussed from the view point, and out of the experience of the girls themselves. To reach the desired conclusions and to gain the confidence and cooperation of the girls it is most essential that the leader or teacher talk as little as possible. Of course, there will necessarily be a certain amount of information which she will want to give the class. However, she must show that she has a complete understanding of the interests, opinions and ideas of her girls. Not

until such an atmosphere is established will the girls be willing to express themselves freely and without hesitation. At first, the girls will be very conservative and will say the things they think they are expected to say rather than giving their own opinions. If they are encouraged and find that their teacher is not critical or easily shocked their frankness increases. Then the teacher must help the girl to see her problem from a new point of view and not force her own advice upon the girl. Usually conclusions are reached which are of vital help and interest to the girl.

Occasionally special topics of interest are assigned and the discussion for the day centers around the topic given. For example, a girl may give a topic on "Care of Teeth." After her talk is over the class is permitted to ask her questions, and she conducts the discussion for the rest of the time, or until the subject has been exhausted.

Whenever possible, outside speakers are brought in to give an added interest in the course. Demonstrations and dramatizations are given.

It is most essential that the teacher herself embody to a great degree the ideals of dress, voice, manner, character and personality which she is trying to develop in her class. A course in personal regimen can be taught indirectly through personality, as well as discussion. Of course, every teacher will realize her limitations, but she cannot be successful if she fails to realize that it is only natural for the class to exact a concrete example of the ideals which she is presenting to them.

Since there is no text book in this course, reading assignments are given from supplementary library books or magazines. Each girl is expected to take notes on her reading and to make her note book as attractive and interesting as possible by cutting out magazine articles and pictures to illustrate her notes. There are usually no daily assignments, but every week or two an assignment is made which is equivalent to a daily assignment. This makes it possible for each student to work at her own rate of speed. If she finishes early and wishes extra work there is always plenty of interesting material to be given.

Special Devices

1. Talks by outside speakers.
2. Style shows (arranged with department stores).
3. Personal appearance chart.
4. Graded on personal appearance three times a semester to note improvement.
5. Senior dress (chosen by committee of personal regimen girls).
6. Demonstrations.
7. Dramatization.
8. Conferences (personal).
9. Magazine articles.

10. Mimeograph sheets of information and outlines.
11. Final report on personal appearance of every senior girl is kept on file in the office.

Accomplishments

It is difficult to measure just what has been accomplished in personal regimen, but we hope we have at least given knowledge and appreciation of a higher standard of living, as well as developed certain habits which will enable the girl to keep happy and efficient, thereby being a better member of society. We feel that personal regimen has helped to improve the standard of our graduation class to a very marked degree. Of course, there are always a few who never seem to have gained a particle by taking the course, but even though present results are negligible we hope our efforts may bear fruit sometime in the future when these people have gotten out into the business world.

At the present time personal regimen is offered in every senior high school in Cleveland and some of the junior high schools. The amount of work and year given varies according to the type of school, but the content in all cases is practically the same.



Cooperative Industrial Education

PROF. H. W. PAINE
Toledo University

IN developing this program, it seems to me that our chairman has evolved a plan which, if more widely used, would eliminate much of the present misunderstanding regarding the objectives of industrial arts and vocational types of education. I am referring to the fact that he has incorporated in a manual arts program one strictly vocational item—this paper on cooperative industrial education. If the different types of work done in the manual arts, the industrial arts and the vocational education divisions can be explained each to the other, we shall do away with much muddled thinking and talking regarding objectives, and perhaps eventually arrive at a stage where we will quit “kidding” ourselves into believing we are all doing the same thing. A small bore rifle and a shot gun are different weapons. I presume one could kill a sparrow with a 42 c. m. gun, or a mosquito with a shot gun; one might even try to pick off ducks in flight with a small bore rifle, but are there not more efficient means of doing these jobs? Undoubtedly the direct, specific characteristics of vocational education can be changed to such an extent that it becomes a general, cultural pre-engineering subject, practically worthless as an avenue of trade entrance. Also, the gen-

eral exploratory and guidance and cultural features of industrial arts education may be abandoned and the subject may be prolonged and narrowed until it is really a pre-vocational subject. However, any of the things we have just mentioned are nothing short of criminal. Each subject has its own most valuable sphere. I hold that a proper understanding of the other fellow's job in our industrial arts and vocational fields will appreciably strengthen both programs and lead to a degree of efficient functioning in each field that at present has been attained in neither. I am indeed happy to be allowed to present the subject of cooperative industrial education on this program.

Perhaps when the term *cooperative education* is mentioned, there flashes into the mind of everyone the usual cooperative set-up; a boy working in industry a week, then going to school a week, this boy being paired with another one who alternates with him between the job and the school. Thus the employer is giving part time employment to two boys instead of one, but has only one of the pair in his shop at a time. The school is giving technical training to two boys instead of one, but has only one of the pair in the school at a time. Let us examine this arrangement a little more closely. It is obvious that the length of the work-study periods need not be one week. In many instances pupils alternate every two weeks, in some instances every day, and in many cases every half day. But the principle is the same. Boys in pairs are alternating between work and school in periods of equal length. The length of the shift period should be that which best meets the local industrial conditions.

This principle is not new, nor is it confined entirely to the Smith-Hughes field. Many universities have used it for years with excellent success in their engineering and commercial colleges. Cincinnati, Antioch, Pittsburgh and the Cleveland Y. M. C. A. have used it successfully in various lines of work of college grade with periods of alteration varying from a few weeks to a full semester.

According to bulletin 130, issued by the federal board for vocational education, "Cooperative part time education is a type of education where industry and the schools work together for a specific training objective." Cooperative vocational education, then, is a joint enterprise conducted by both industry and the school for the purpose of carrying on vocational education. This definition infers that industry has obligations further than the mere furnishing of work to the cooperative boy, and this is indeed the case. The boy is really a twentieth century apprentice, whether formally apprenticed or not, and industry owes him something more than the mere supplying of a job.

The old-time apprentice would often finish his apprenticeship as a machinist or a tool maker and find that he was an excellent machine operator, but had had practically no technical training in

the related branches of his trade,—in fact, he may have been kept on one or two types of machines throughout his apprenticeship period. It is quite obvious that this new cooperative scheme has great possibilities in overcoming these objections. The school can give this related technical training as the boy needs it, and in sufficient quantities and of such quality that intelligent workers are produced who will be able to go to the top in their chosen trades instead of turning out “dumb” workers who are doomed, from lack of sufficient technical knowledge, to work in the positions of lower pay. The school, then, must tie its related technical knowledge up as closely as possible with the work the boy is doing in the outside shop. This tie-up will force our schools to give truly related material, material that is live and pertinent, thus greatly vitalizing our school program. Related material given in connection with some of our unit trade courses that has a relationship of only a forty-second cousin at best, cannot “get by” under our cooperative arrangement. Some of our so-called related work given with unit trade courses is truly ludicrous. If anything should happen to some of these so-called strictly vocational set-ups, it would remind one of the two taxi cabs that suffered a head-on collision in Glasgow. Thirty-eight Scotchmen “boiled” out of the wreckage, only two of whom were paying fare. It seems to me that this is just the trouble with much of our related work—too small a per centage is paying fare. This same story might also apply to some of the objectives of industrial arts education as well as “relatedness” of related subjects for vocational education, but “why bring that up here?” Let’s get back to the subject of cooperative education. The all too common practice of trying to dress up the formal high school subjects—drawing, mathematics and science—with the words “related” for consumption of the city’s vocational department, will not have a chance to function in our cooperative plan. The boys and industry will make known their specific related subject needs in no uncertain terms. The three tests for true functioning of related material given on page six of the cooperative bulletin, will always apply to material for which the boys ask, but how much of the dressed up college entrance material can pass these tests?

“1. Can it be shown that the possession of certain specific information or knowledge is a definite asset to a worker in the trade? If the answer is ‘yes,’ the content meets the first test.

2. Can it be shown that the possession of this specific information or knowledge is of more value to a worker in the trade than to an ordinary citizen not working at the trade? If the answer is ‘yes,’ the content meets the second test.

3. Can it be shown that the subject matter would be an asset to all workers under normal conditions on a given level in a specific trade? If the answer is ‘yes,’ the content meets the third test.”

We have discussed the duties of the school in regard to our cooperative plan. Now, how shall we make it function? And what responsibilities must industry accept in this training program?

First of all, there should be an advisory committee composed of representatives from the manufacturing associations, contractors, labor bodies and the vocational department of the schools to insure the cooperation of these different groups. If training is being given in many different lines of work, it may be advisable to have sub-committees appointed (specialist committees, if you will) whose duties are to offer suggestions, to advise and to give active aid in developing and perfecting the courses of study, also in securing adequate and proper equipment and material.

Futhermore, there should be a specific agreement between the employer, the co-op worker, his parents and the school, regarding the various details of the boy's relationship with his employer. These agreements usually take the form of a tentative apprenticeship contract, setting forth the hours of employment, wages, duties and privileges of the employed and employer. A sample contract may be of interest,—the co-op plan maintained by the Ohio Brass Company in Mansfield, Ohio, in connection with the vocational department in the Mansfield schools. This company places the responsibility of looking after the co-op boys upon the shoulders of the man in charge of apprenticeship training. Records are kept of the hours the boys spend on each type of machine and their success in the work. This sample card has the following items that are checked at regular periods by the apprentice supervisor:

"To the instructor:

1. Has the apprentice progressed satisfactorily?
2. On what kind of work, in your opinion, should he be given specialized training during the coming month? Why?
3. How well does he follow instructions?
4. Does he show any dislike for any part of the work?
5. How does he respond to work he does not like?
6. What general recommendations do you suggest for better progress?

Instructor's Rating of Apprentices

Lathe	Department	Miscellaneous
Fox Lathe	Milling Machine	Loyalty
Attendance	Class Work	A-Excellent
Shaper	Application	B-Satisfactory
Bench Work	Drilling Machine	C-Average D-Poor

Signed.....
Instructor."

The apprentice is also required to answer the following questions each month:

1. Are you making satisfactory progress?
2. If not, in what way can the company help you to improve your work?

The back of the card contains the time distribution of the co-op pupil's work. These cards finally find their way to the manufacturing superintendent, who signs the following statement:

"I have examined the above record, and have made recommendations to the instructor as follows:

Signed.....
Manufacturing Superintendent."

The boys are moved from machine to machine at regular intervals in order that their training may be as varied as possible. Their pay is based upon a certain percentage of the pay received by a master craftsman. In addition to this percentage pay, we have the following stipulation:

"In addition to the above compensation, the company will inclose in the apprentice's pay envelope at the end of each pay period a check amounting to 10 per cent of his earnings for that period, payable to the Ohio Brass vocational fund. The apprentice will deposit such checks with the Citizens National Bank & Trust Company of Mansfield, Ohio, where they will be credited to his account, and will be held in trust until such time as he shall successfully complete his apprenticeship. Should the apprentice, for any reason whatsoever, fail to carry out in full the provisions of this contract, that portion of the vocational fund so accredited to him on the books of the Citizens National Bank & Trust Company shall be paid to the vocational department of the Mansfield senior high school, to be used for the maintenance or purchase of machinery and equipment.

"In the event that the apprentice faithfully and satisfactorily complies with the provisions of this contract, he will receive from the company a certificate of apprenticeship setting forth that he has completed his term of training. Whereupon that portion of the Ohio Brass vocational fund which has been accredited to the apprentice on the books of the Citizens National Bank & Trust Company shall be released by the company, and shall become subject to the order of the apprentice.

"Furthermore, in consideration of faithful service rendered as above, the apprentice shall be entitled to a bonus of \$200, which shall be payable immediately upon the granting of said certificate of apprenticeship. This bonus is offered solely as an inducement to the apprentice to complete the full course of instruction pertaining to his trade, and no part thereof shall be deemed earned until all

provisions of this contract have been satisfactorily fulfilled, and the issuance of the certificate of apprenticeship has been duly authorized by the company."

This particular device has worked out extremely well, as it has added a monetary reward for faithfully fulfilling this apprenticeship contract.

The accompanying graphs compiled from data secured from federal bulletin 13 show the extent of co-op training by trades and also by states, thousands of students now being engaged in this type of work. Graph 1 indicates that co-op machinists lead in number, followed by electrical workers, who in turn are followed by retail selling, commercial and auto mechanics closely grouped. The figures at the right of the trade name indicate the number in that particular industry.

Graph 2 shows the distribution of students by states, Ohio leading, followed by Pennsylvania and Massachusetts.

Graph 3 shows the total number of co-op courses by states, Pennsylvania leading, followed by California and Ohio. Although this data is not complete, it indicates general conditions in this cooperative field.

What are the results of this type of training? What are its advantages over other types such as the all-day trade school or the four or more hours per week trade extension school? By what should the success of trade training be judged?

The answer to the last question is simple enough. Its success should be judged by the relative numbers who enter into and succeed in the trades for which they have been trained. Weighed in these scales, the co-op system has the unit trade or the all-day school badly beaten. Different co-op schools show a placement in industry of from 75 to 100 per cent of their graduates. How many colleges, or rather how few, can point to similar results?

Briefly, the advantages of cooperative trade training which may or may not have been preceded by one or more years of unit trade work, are as follows:

1. By dividing a given group into two parts, with one division in school and the other in industry, twice the number are able to receive training than would be able to receive it if all the work was done in the school. This, of course, reduces the cost to both the school and to industry.

2. The learner is subjected not to conditions similar to industry, but to conditions that actually exist in the industry itself.

3. The close contact between industry and the school brought about by the shifting of groups is very beneficial to the type of work done by the school. It keeps the school subjects alive and strictly

vocational in content and prevents the possibility of the related work becoming academic in character.

4. It solves the problem of placement upon graduation. The boys are already placed, for with this co-op plan, statistics show that 80 or 90 per cent of the boys shift over to full-time employment upon graduation in the same firm in which they have been co-oping.

Cooperative industrial education is without doubt the highest developed form of trade training. It is economical, efficient and effective, and practically guarantees placement upon completion of the vocational course. Supervisors and others charged with the administration of vocational programs have no more effective device at their command than that of cooperative industrial education.



Creative Opportunity in Manual Arts

M. J. GROSCHKE

Director of Vocational Education, Erie, Pennsylvania

INDUSTRY, over a period of the last generation, has come to a period of mass production. Through scientific inventions and appliances, commodities are produced in almost inconceivable quantities. What were at one time known as handcraft trades are now almost totally controlled by the machine. The manufacturer of today must be alert to discover changing business trends arising from the keen competition he must meet. A transfer of labor from one type of employment to another accompanies every rearrangement of industry where mass production methods are installed. The transfer of labor, the rapidity of production, the decrease in man power required, will ultimately bring shorter working days per person in order to provide equal opportunity for employment for the workers available.

The reaction to fundamental laws in the economic industrial life, that is, in order to live one must buy, and in order to buy one must work, will of necessity be adjusted. From this great industrial change and the equal distribution of labor there will come more leisure time for every individual. This leisure time will be profitable to the people of the next generation in the degree that intellectual competency prevails. In somewhat the same manner as in industry the great educational system of this nation has evolved, now presenting a highly organized and scientific order of teaching. Does it not appear that we have lost something? Are we teaching boys and girls, or are we teaching subjects?

In the field of manual arts we have instruction that, if conducted under the proper guidance of a teacher with a full realization

of the far-reaching effects of his teaching and the proper attitude toward building a life, will instill in the pupils ideals of the highest character and a wholesome life to endure.

We must not think of art for art's sake, but art for life's sake. Surely these are some fundamental principles that must be very carefully imparted to the pupil; but how many of us through our systematically outlined courses of study have not practiced mass production in this important field of general education? We standardize projects and convey the idea to the pupil in the form of a blueprint or index number in a book or other publication. A pupil is subjected to adult experiences in interpreting some other person's idea of a particular project. In later years this same pupil, no doubt, will be confronted with a transfer of labor responsibilities or must readjust himself in the industrial world to changing conditions. All through his manual art classes he followed detail and examples assigned to him, previously thought out by the standardized system of teaching. He will have developed good habits of following, but will have no initiative or power of originality to help him meet a condition of readjustment in the constantly changing industrial development. Why not bring the boy into every phase of the project he becomes interested in? Why not offer these blueprints and ideas from printed publications as mere suggestions? Cannot the pupil's contribution, be it in the drafting room, woodworking department, printing department or general metal shop, under the supervision of the instructor, be of some value? Should not some encouragement be given the pupil to rely to some extent upon his own ability to create something entirely? Upon his first introduction to shop activities, should he not be made to realize that he is by nature original in his thinking, and that this is the place for development of his natural talents? By this means his cooperation in everything he does might be sought.

Manual arts offers a great opportunity for constructive thinking. If we could only get our pupils to visualize or have a mental picture of a project, it would have its effect. Preliminary thinking creates interest and ambition to do things. Independent thinking will develop originality. The ability to meet a situation and have confidence in one's self is of vast importance to every one. To share the responsibility of seeing an idea through to completion indicates interest. Continued effort for self-experience, if introduced in the formative years of a child's life and encouraged at every opportunity during the school year, will run true to form when he is confronted with the problem of making a decision for himself.

From the point of view of creative thinking manual arts furnishes a rich educational contribution. Let us foster it and strive for intellectual competency for our youth in order that it will profit thereby in years to come.

Aeronautics in the High School

S. H. HURTUK

Waite High School, Toledo, Ohio

AVIATION has probably suffered more from cheap publicity and misrepresentation than any other human activity, but it is now rapidly becoming a popular and safe means of transportation. Popular interest in this mode of travel is growing, and the time has come when every one should have some knowledge of the subject. The airplane has come into its own. Today it is both a military and a commercial necessity. With planes passing through the air from city to city, with air mail and express already playing a vital part in the nation's business, a demand for trained men has arisen that has already far exceeded the supply. Dozens of different kinds of positions will be available for young men who have specific knowledge of practical aviation.

It is evident that aviation of tomorrow, which will be so much more extensive than aviation of today, will depend upon the familiarity and safety with which the young people can deal with aeronautics and the airplane. It is important that the educator anticipate as many of these situations as possible and adjust the educational content accordingly, instead of allowing the situation to develop fully before training people to meet it. Much of the property loss and many deaths, due to the development of transportation by automobile, could have been prevented with proper education in the public schools coincident with the development of the industry. Some wide awake educators of the country realize this, and we find them rearranging their educational programs so as to train their student bodies in anticipation of aeronautical development.

The public acceptance of the airplane will, in the last analysis, depend upon its safety. Eventually we shall have machines that never fail structurally; they will be under perfect control aerodynamically; and they will be supplied with so many engines that the source of power will never fail. Perfectly safe aircraft is almost in sight. Airplanes fly safely and successfully, or unsafely and unsuccessfully, according to the care which is put into the building, examination, inspection, testing, and care of them. There will also be improvements in airports just as there have been improvements in roads brought from the development of the automobile industry. Air travel is here and has come to stay. It will grow to vast proportions as its advantages over other forms of transport become better understood. Aviation is now probably out of the invention stage and in the engineering stage. We need to develop carefully the things already invented. It is safe to predict that flight will soon be as indispensable as automotive transportation.

The present interest in aviation is perhaps more nearly universal than interest in any other one commercial activity. No line of human endeavor so strongly appeals to the juvenile mind as that of aviation. I spent two days at the recent airplane show which was held in Detroit, from April 6 to April 14. I was much impressed by the great numbers of adolescent youths, who crowded the gates for entrance. Once inside, I noticed further evidence of their interest in their comments and in the questions which they put to the demonstrators in charge. At the airport, where we saw planes taking off on the average of one each minute, the interest of these youths ran high. They used intelligently aeronautical terms which the average adult does not understand. There is no further propaganda necessary now in order to get the boys and girls interested in aviation. The interest is there, and the next step is to work with the teachers in order that they may properly guide "air-mindedness" into "air-wisdom."

It should be the constant effort of the schools to introduce and develop subjects that are worth while in adult life. Aeronautical education has already taken a place in the public schools of the country, and there seems no doubt that the demand for this type of education will increase as the possibilities of aeronautics develop. Aeronautical education on the secondary school level depends for its aim and content upon the part that the various branches of aeronautics are to take in the civilization of tomorrow.

It was my privilege to be present at the meeting of the Guggenheim fund committee on elementary and secondary aeronautical education, which met in Cleveland, February 25, 1929. This committee, completing a survey of the schools in the United States, found that there are now 206 schools giving some form of aeronautical instruction. These schools are not trying to make everybody aviators, but are taking advantage of the tremendous natural interest in this subject. Many courses which are "dead" can be motivated by combining with aeronautics. It can be correlated with shop, mathematics, science, and other subjects, or it may be taught as a separate subject. Interest in the course may be encouraged by forming clubs, where the procedure would be learning history, building models, holding contest flights, etc. There are eighty-five schools in the United States with such clubs. There are thirty schools giving purely aeronautical courses, seventeen evening schools giving aeronautical courses, and fourteen schools using aeronautics in correlation with other subjects. These numbers are constantly increasing, however, as other schools join the forward movement in this new subject.

The fundamental problems confronting the educators in this program are the problems of curriculum and administration, and the problem of teacher training. We must ask ourselves: What skills will we develop? What content must we teach? What training

must we give? How can these best be provided? etc. We will need to make job analysis and reconstruct our instruction in order to bring such a course to a successful conclusion. Many high schools already well equipped for auto mechanics, can establish areonautical work at little expense by planning the course to follow closely the automotive course, letting the aero subjects replace the automotive subjects. The progressive instructor will also easily make the change in instruction by enlarging his own knowledge along this line.

There is a field for the next generation in air transportation. There is at present a need and an opportunity for young men to enter this industry. The boy who wishes to enter the aircraft industry should look over the entire field in an effort to decide intelligently which phase of the work interests him most. Here it is necessary to have scientific knowledge of the industry to enable him to know whether or not he wishes to enter it as a life vocation. If he decides to earn his livelihood in the industry he must have sufficient knowledge and training with which to do it successfully. He must have expert knowledge and skill, sufficient to enable him to enter this field as his vocation. Public schools should give enough areonautical education to enable the individual to choose his vocation wisely. It is the teacher's distinct duty to point out the limitations of aviation as well as the opportunities. Pupils must not be taught that it has not disadvantages and short-comings. The main point is: American youth *will* fly—it is up to us to make flying safe as possible by giving valid and worthwhile information, and it is further up to the teachers to keep up-to-date in this matter, even though they feel that aviation is a little "flighty."

In aviation there will be large developments along two general lines; manufacturing and operation. In these two branches there are going to be thousands of opportunities for young men. We are now beginning, in a small way, to build airplanes in production. This means that the manufacturer will hire men expert in their respective trades. There is opportunity in the manufacturing end of the industry for the boy who is compelled to leave school at the high school age, and who is mechanically inclined, and interested in doing things with his hands. The boy who has the opportunity to carry his education beyond the high school should certainly do so, and plan to enter the industry through one of the other branches.

A distinct duty of the schools is to re-educate, on a secondary school educational level, adults wishing to get into aviation. Financial aid for such classes may be arranged through Smith-Hughes. At the present rate of development the demands upon the public schools will soon exceed the equipment and teaching forces of the high school. There is a great need for tested information, analyzed and practicable, to be taught in the schools. It will take much time, study, job analysis, and intelligent cooperation to accomplish results. It is to be

hoped that the industry and schools will soon be working together on this problem, carrying out the training on a cooperative basis.

I am sure you will be interested in knowing what is being done by some of our neighboring schools in the interest of aviation. At Cass Technical high school, Detroit, they have courses in theory, some work in design, and courses in testing and engineering. They have clubs for model airplane building, hold contest flights, etc. They have included in their auto mechanics course some aeronautic work. In Buffalo they have areoplane engines for use in the auto mechanics department. The war department has loaned them \$35,000 worth of aeronautical equipment for instructional use in the schools. Six large aircraft shops are to be included in their new one-and-a-half-million dollar vocational school now being completed. In Erie, Pa., they have aeronautical equipment loaned them by the navy. The pupils get their theory in school and actual practice at a nearby hangar. In California there is one school offering a complete course from ground instruction to actual flight, supported by public taxation. This is thought to be the only school of its kind in the United States supported by the public. At the present stage of development it is my belief that no school should attempt to teach actual flight because of responsibilities involved, excessive costs and difficult administration.

At Waite high school, Toledo, we have \$10,000 worth of aeronautical equipment, loaned us by the war department. This includes Liberty engines, instruments, etc. We are including some aeronautical work in our auto mechanics department, our mechanical drawing department, our electrical department, and our wood shop. Next year we expect to offer in aeronautics a course of which I have had mimeograph copies made for those of you interested. The general purpose of this course is to develop better trained young men at a time in their lives when such training is quickly grasped, by teaching the theory and principle of flight, so as to prepare them for advanced work in higher institutions and commercial fields in aeronautics. This course is designed to fill the first need of aeronautical education. It covers the theoretical and technical phase of a ground course, such as is possible to present and develop in the present-day school. The responsibility of teaching this course is divided between three departments: The auto mechanics department is to teach nomenclature, care and maintenance of airplane engines, trouble shooting, instrument construction, building of scale models, and do testing with a wind tunnel. The mechanical drawing department is to teach various types of aircraft, aviation history, aerodynamics, blueprint reading, elementary design of airplanes, properties and their uses, meteorology, aviation law, airways and airports. The electrical department is to teach aeronautical radio.

Because of the greater educational values to be realized it is important that boys be taught to design and build their own planes. Many of the leaders in aviation today got their start by designing and building models. This furnishes the basis for learning the principles of aeronautics. A properly constructed model aeroplane will look exactly like the large one, be made of the same materials, operated and controlled in the same way, and fly in the air in just the same manner as will its original. Building and flying model aeroplanes shows all the parts of real airplanes; what each part is for; what it does; how real machines are assembled; erected, aligned, and covered; what makes them fly; how they "take-off" and land; and many other things that could be learned only by practical experience with a real machine. The building and flying of a model airplane is an accomplishment of which any boy may well be proud. It is a tribute to his mechanical workmanship, to his patience, to his ability to read and interpret plans, and to his desire for practical knowledge of airplanes and their construction and operation.

It is also of paramount importance that provision be made in the course for the welding of fuselages, which are now quite extensively made of thin walled tubing, terne plate, and duraluminum sheet. It is desirable to have a stripped chassis in the shop. If it is not available, it is recommended that the students build a six-foot scale model for demonstration purposes. Where cost of instruments is prohibitive, charts may be used to good advantage. Where space permits, gliders may be built. Trips should be taken to nearby airports and airplane manufacturing plants when possible, and advantage should be taken of addresses by authorities from the industry and ports.

These mimeograph copies include suggestive shop layouts, courses, texts, tools and equipment, and also information whereby it is possible to obtain equipment from the war department merely by paying handling and transportation charges. It might be added that this course could be used in whole or part, to fit the demands of your own particular school and community. The models which you see here were constructed by the students at Waite High School, Toledo, in their study of principles of flight and aeronautical terms involved. This type of work is uplifting and instructive. It teaches the boy to use both hands and head, and here there is no limit to his creative ability.

English and Printing

E. E. SHELDON

Lakeside Press, Chicago, Illinois

IT was my privilege, possibly a pleasant duty, some many years ago to present before this organization in Lincoln, Neb., a paper on printing as a fine art.

Down through these years printing has gradually come to occupy an important place in industrial education in the schools. More and more the possibilities of printing as a fine art have been recognized. This convention is devoting two half-day sections to printing, one combined with the art section, and there is also one number on the general program given over to the graphic arts.

The relation of the fine arts, included under the general term, graphic arts, English, design, printing and bookbinding is the theme this afternoon.

The power of self-expression of a large and rapidly growing group of peoples is known as English. This English that has been and is being developed and its relation to an art known as printing is the subject assigned on the program.

The origin, the growth and the development of the English language has been the subject of many volumes. The story of the characters used to represent the sounds of this language has also been told in many forms. These subjects, while interesting and valuable, are not within the scope of this paper. Our theme is the relation of English to printing.

The subject will be treated from the viewpoint of English as a fine art and its relation to printing as a fine art. Incidentally, the training values of printing in teaching English may be considered.

All matters considered will be from the educational or school standpoint.

Whatever may be expressed should have for its aim and end some one, or more, of many reasons. The reasons may vary from pure nonsense to help one while away an idle moment to the most serious study of things eternal. Whether for amusement, entertainment, education, improvement, or inspiration, one who prepares any material known as English should have in mind some definite objective and work toward that as his end in view.

Whether one creates a story, or writes a poem, or sings a song, or puts into English form any ideas upon any theme, the motives that govern should be: has the material somewhat of permanent value and will it lead someone to a broader and brighter outlook on life and does it give joy and pleasure to the one who creates the work.

If the material appeals to the base and low in human nature, no designer should debase his art (in the name of art) and design

English of such a nature to be printed and broadcast where there is no real cause for its existence.

Someone has said that things essential persist, that the conspicuous is fallacious and that the spiritual is supreme. However, that may be, it is quite generally agreed that it is foolish to play to paid claquers in the galleries for their applause and lose the audience who pay the bills. It is also well to remember that the themes of the great masterpieces of literature that have lived are not transient subjects.

The design of any particular piece of English should show at once both in formation and in decoration why it is so planned. Volumes on science, or mathematics require a certain treatment, while the motif for a volume on history or civics, may be entirely different. Books of travel, in design and decoration, should lead one to desire to see other parts of the world. Volumes of poetry should show by the design the nature of the content.

Many years ago Dr. O'Shea wrote the following, true then, and unfortunately, with all advances made, true today:

"Some day we shall give more attention than we do now to the aesthetic character of school books, tablets, illustrative material and all other apparatus of the school. In my opinion a child who uses a reading book of artistic make-up derives more culture value therefrom than he would from all the pictures that could be crowded on the walls.

"Great as may be the influence of a fine picture upon the wall, it cannot equal that of the thing with which the individual is in vital contact every moment, and which he employs as a means to the accomplishment of his purpose."

In this discussion, only educational programs are being considered, but the tremendous quantities of catalogues, directories and various other pieces of advertising or ephemeral matter are not only necessary, but valuable. All such material should be of the best design and printing possible for the sums expended and the purposes in mind.

Printing as a device for teaching English has been the subject of many controversies that have extended from those interested in securing a printing equipment to those seeking a panacea in order to assist in putting across some method of English instruction.

As has often been said, there is no particular virtue nor art in placing on end battered broken types, smearing them over with ink and taking impressions improperly placed on nondescript pieces of paper and broadcasting the product in the community as examples of the printing art.

There is neither training in English, in printing, nor in art in the procedure described, but the formation of a number of habits that are liable to persist is the usual outcome.

The value of printing in teaching the mechanics of English is due primarily to the care and attention to details. Possibly, errors in spelling, punctuation, capitalization, or spacing may show up more clearly on a printed page than in manuscript, but this is not a real argument for the use of printing in English training. Many manuscripts are a pleasure to look upon and are a work of art.

The same results in teaching the mechanics of English in the English classes as are obtained in the printing classes will be secured when the same attention to detail is given by the teacher to the written manuscript as is given by the printer to the proof.

Why not mark errors with the standard proof marks and insist on a clean revision? Think of the value of the training in the formation of correct habits of work and attention to detail that the students would acquire.

Proof marks give definite, clear, concise instructions as to what to do and where to do it, and the revise shows how well the students have followed instructions. A few definite assignments properly followed through might be of advantage to many students.

No English work should be accepted from any student until he agrees it is the best he can do and signs his name to such a statement.

Why burden the printers with the job of teaching the mechanics of English, when the subject can be handled much more easily in the manuscript in the English classes and correct habits be formed at the start?

No one, to my knowledge, has yet presumed to say that printing as a school subject improves the quality of the content of the English put into type.

One may well argue that as the mechanics of English improve, so does the content, possibly a carry-over in the formation of better habits of thought, but it is not necessary to use printing as the teaching device. Insist on a clean manuscript and thereby raise the general standard of mechanics and content.

The problems of capitalization and punctuation should not seriously affect the work of either the teachers of English or the printing instructors. All manuscript, whether a simple paragraph, or a theme, should conform to the principles of good book work as laid down in such manuals as the style book of the University of Chicago Press and carried out in their publications, or the publications of the Riverside Press or The Merrymount Press, and also in periodicals such as *The Atlantic Monthly* or *The Century Magazine*.

There is a tendency to permit advertising, lack of punctuation and capitalization to influence the preparation of copy. The methods used by advertising men are from an entirely different viewpoint than those in book work and the aims of teachers should be to establish a firm foundation. With a solid foundation one may erect

a superstructure that may satisfy the whims of the passing hour, but the foundation will stand the stress placed upon.

The printer divides words phonetically, the English teacher, etymologically; why the difference? A good rule for all to follow is: Never separate a group of letters representing a single sound; and so divide a word that each part retains its present sound.

If all students are taught to produce the elementary sounds correctly and then learn to articulate clearly, enunciate distinctly, and pronounce correctly, the problems of word-division will vanish.



Printing—A Fine Art

HORACE CARR
Cleveland, Ohio

I AM GOING to tell a story. It is a true story. When I was about seven years old, an uncle in another city bought a printing press. He set up in 10-point italic a letter setting forth family occurrences, and sent a copy to each member of the family; but he changed the name at the head of each letter. My father received a copy which said, "Dear brother Harvey," and then went on to tell the news and wound up with a signature, all in print. I was familiar with printing in newspapers and books, but to see a personal communication which bore every mark of being intended for one individual, printed, aroused my curiosity, and I meditated over it.

It happened that the kitchen door—we lived in a pretty old house—got past its days of usefulness. My father got another door from the local lumber man and took advantage of a rainy day to hang it. It was a little bit large for the place and so he trimmed it and sawed it down, and planed it until it fitted. He finished shortly before dinner time. We ate at noon in the country. My father was a farmer.

That letter was rankling in my mind, and so while we were waiting for dinner I asked him how it happened that a letter was printed. I thought printing was done for newspapers and books, and I didn't understand how a letter could be printed. He explained how printing was done, and took a little piece about an inch wide sawed from the top of the door, with the grain running the short way so the end of the block was the side of the grain. He was a handy man and could do anything, so he cut with his knife the letter "H," which was the initial of his name and mine. That was the first type I ever saw. While he was finishing up, he cut his thumb.

It bled, and he dabbed a little blood on the letter and printed it on the margin of the local paper. That was the first printing I ever saw done. From that time I was cut out for a printer.

I read everything I could find about it and before I ever saw type I had made myself wooden type out of willow wood. I couldn't make it accurate enough to lock, so I cut it with a dovetail bevel and slid it into grooves in a board. I inked it with a felt roller and made impressions from another roller covered with a piece of an old hat.

I had been at it two or three years before I saw a printing office, or type. We then lived in Arkansas, near Fort Smith. A newspaper was established in a little town near us. The editor of it was a young man, and he and his wife did the work. The first time that I went to town after the paper was established, I made a beeline for the printing establishment. The wife was distributing some long primer from the editorial column, a pretty sizable handful, about six inches, single column, of what would now be ten point. She dropped some on the floor. She couldn't let go what she had, and so left on the floor what had fallen. I was a barefooted little chap in a bulrush hat, but I went over and gathered up the type and arranged it in order along the edge of the stone. She was quite surprised that a little farmer boy should be able to read type, and I hoped to get a job there. I never did. They thought I was too little, but shortly, after I had a chance either to go to high school or to start in the printing trade and I chose printing and have been at it ever since.

Reference has been made several times to Henry Turner Bailey this afternoon. Years ago before I knew who Mr. Bailey was, the American Type Founders printed a little quotation from him on the bottom of a type specimen which said in effect: "The art of printing, like all other arts, reaches its finest expression in balance and proportion among its parts and the lack of excess." That is, in "due proportion." I was greatly impressed by it, and since then I have become thoroughly convinced this saying about printing is a very true one. I am disposed to be heretical in all lines of human affairs except printing. In that I am a conservative.

Printing is primarily for the diffusion of ideas (and feelings incidentally), but it seems to me that it should be a kind of limited art, a kind of art in which the means, the vehicle, should not be much in evidence. The best book is the book that is most easily read and conveys the ideas to you with the least consciousness of the type, and paper, and manner. I had a little book some time ago from Swan Sounenschein & Co., set in an English linotype face. It had freaky letters, and was distressing to read, somehow. You were always running up against things that looked unfamiliar, and you thought the type was broken, and being a printer, you had to stop

and examine it; and then you found it was made that way. I could never finish the book. It was troublesome to me to read it. It impressed on me again the fact that printing should be what might be called an intermediate thing. It should be between the writer and the reader, and the printer should be as little in evidence as may be in regard to it. Good printing is plain, simple printing, that attains its end with a minimum of effort and by calling a minimum of attention to itself.

The first printers were men who worked with little in the way of tools and apparatus. They had wooden presses with stone beds, and iron screws to force the platens down. Some of the printers had but one font of type, some two or three. Ratdolt, who was one of the greatest printers of Italy, had thirteen fonts. In our shop now we have seven hundred. I think the multiplicity of things to do with in the way of design is as much a hindrance as a help to printers. I think a printing office could be fixed up with about six or seven series of type and be ready to cope with any emergency that would ever come up.

I feel that the instinct of workmanship in men is satisfied when the work has been done in a workmanlike manner, when it has reached its objective successfully, without any impediment to the reader. But in addition to that there is the possibility of having a little play with it, a little enjoyment as you go along, a few of the poppies among the wheat as I saw them in France. (They have a pleasant custom of letting the poppies and corn-flowers grow among the wheat. It makes a very nice effect along the railroad, and it contrasts favorably with our lack of such things here.) I think there is a chance to employ a little decoration, to me a little initiative. It won't disturb the thought; sometimes it can be made, by suggestion, to help it along.

We print a good many musical programs for Friday recitals and that sort of thing. In my early days I used to take the order, and from the content of the program, as far as possible determine what would be an appropriate color and paper for it, and how it should be handled. I remember one particular program which we had. We didn't know anything about it. It was for a musical entertainment. We didn't know the circumstances. We worked out a very nice program in gray and lavender on gray paper. I remember this because Mrs. Carr and I often talk about it. It turned out to be a coming-out party for a young girl, and we had made a grandmother's party out of it, in gray and lavender! Since then we have made it a rule when such an order comes to us to find out as much as possible about the event, get as much information as we can. If it is to be given for a woman we try to find out whether she is young or old, blonde or brunette, how the rooms are to be decorated, etc.,

and then prepare a program suitable to the occasion. It is surprising how one can get into the spirit of the thing if one tries.

Our work of late years has been falling into book printing, I think I am a book printer, anyhow. I don't like big, loud type. I find in book printing one travels a pretty straight and narrow path. One is between the devil of monotony, and the deep sea of getting things too funny or fussy. It is really quite a difficult art to set up a book and dispose of the heads, and margins and side-notes, if it has them, or headings and illustrations and tables if there are any, as well as the type page, and have them all hang together consistently and not be obtrusive in any way.

I have brought a few things along this afternoon and perhaps they can talk more forcefully than I can about what I am trying to say. If I had known we were going to hear reference to some of our English friends I would have brought along a little book we printed for Bernard Shaw. Bernard Shaw wrote an article on printing for the *Caxton Magazine* and we reprinted it.

Here is a simple thing I think is good. I don't want you to think I am conceited, because a good many of these are my own work. I didn't have a chance to get any others. Here is a catalog of the fifty best prints of last year. That is a page that is pertinent to the subject. It goes straight to the point and tells you what you want to know. There is no sensation. It is severe and restricted. Here is something from the Nonesuch Press, London, a very pleasing type. Here is one from the American Type Founders Company. It is a little monograph that they printed. That is right for the work, it being to the point on the matter of type, and having the decoration where the decoration belongs. The type is good. Everything falls into place. You feel that it is perfectly appropriate to the subject.

Here is something a little different,— a specimen of a book printed at Oxford. The type was given to the University by John Fell. By that I mean he got the foundations and matrices from Holland for them and gave the punches and matrices to Oxford University. When I was in the foundry a dozen years ago, they were still using them, and they gave me five or six letters of Fell's type which I gave to the American Type Founders Company. It is an oldstyle before Caslon, much the same form, but somewhat peculiar, and it is still used by the university in certain editions.

Here is another thing. This is different. This is a notice of the annual meeting of the Rowfanter Club. They wanted something characteristic of the occasion—"For that it be forgotten not of no Rowfanter that the feast of Candlemasse is toward, whereunto are ordeyn'd their chiefest ceremonies, bid we you take notice: That on Tuesday which as it is of Februarye the second daye, is likewise Candlemasse, that ye do attend at the Sign of the Candle at eight o'clock

and not later of the evening, that at that time the business of the Club be performed with intelligence and good will. And whoso has gifte to bring, let him not fear rebuff.

"And for Saturday next, though the House will be open and the Candles alight, expect no notice, that ye be not disappointed.

"The President: George Franklin Strong. The Secretary: Benjamin Parsons Bourland. Anno Domini nineteen hundred twenty-six.

"Of an hundred threescore and three copies of this notice this is number one hundred and sixty."

They have an archaic flavor in all their notices and we use the black letter quite frequently.

It appears to me that certain things follow from what I have said about printing being it itself a colorless medium between the writer and the reader. This applies to books. It doesn't apply to advertising. In advertising the chief aim appears to be to attract attention, and the method of attracting attention which is becoming uppermost with us now is to do something like this, or this,—Ultra-Bodoni gay colors. Those things, I think, may serve their purpose, but my personal feeling is that they are like sitting on a thumb-tack. I prefer to have my attention attracted a little more congenially. It seems to me these things, applied to printing that isn't of the grotesque and transitory kind, are like wearing a red plug hat down Euclid Avenue. You can get lots of attention, but I question the value of the kind of attention gained by such methods.

I must say as I said before, I am not an advertising printer. I am merely telling my point of view. We have a good many customers in schools, and other organizations of that sort, and we have tried in our work—we can't do it altogether—to give each customer a settled style for his routine work. On special occasions it is a different matter. The programs for the Chamber Music Society are set in one style with cream-colored paper, the Rowfanter Club announcements are set in another type and are printed on India tint paper, a little darker than the other, and they also have a special style of script, an extraordinary one, handled in a different way. The Institute of Music work is in a still different style. The Play House in another face, and so on. We have tried to give each institution's work an individuality that will hold to it through all of its ordinary routine work. When it comes to a special occasion we don't feel ourselves bound. Take the Cleveland Orchestra programs. We don't print the big programs but the little programs for the woodwinds and the quartet, and so forth, are set always in French type and printed on white sheets of hand-made paper. They are always the same. If they have to four pages, we make them so; but if they happen to be short, we use a single flat sheet.

It seems to me there is a chance for any printer and for printing schools to lay considerable stress on those things. The Rowfanter Club is a club of book-lovers, and so we use the long characters. The Institute of Music we set in Scotch Roman. The Play House programs are in Caslon, and the ones for the Chamber of Music we set in Cloister Oldstyle. We tried to make them with Goudy's Kemerly, but that is too limited in the number of sizes. We found it wasn't going to be feasible with the varying lengths of casts of characters and the reviews of the plays, to handle Kemerly and have it look well. There were not sizes enough to keep it uniform. We asked them to try out Caslon and we have been running that now for eight or ten years.

In the printing of books, type can be adapted to the subject matter of the book. In a book on the matter of literature that we printed, we had a subject that dealt with the seventeenth and eighteenth centuries. We set that in Caslon by hand and we didn't depart from the Caslon type at all. The book was set in ten and twelve-point and the title-page was set in eleven, twelve- and twenty-eight point. No other sizes were used in the book. We had a border on the title-page, made up with the brackets of the twelve-point—no other decoration.

We printed a book for a woman who formerly lived here. She now lives in New York. She had a diary of a member of the family four generations back. The little daughter of this lady's brother who had moved to Ohio, had been taken back to Trenton, New Jersey, where the child lived until she was seventeen years old, and then finished her education at a Philadelphia school and came home. Her aunt was proud of her and decided they would come to Ohio to see the child's father. They made the trip and the aunt kept the diary. For that we wanted a type of the time of 1837, but you couldn't buy it now; it is too bad. The type of 1837 was a strong Bodoni-like letter, and very clumsy. We substituted Scotch Roman. With the title on the cover was a cut of a canal-boat. The first part of the visit was made by canal boat. There were four styles of the journey—canal-boat, railroad, stage-coach, and river steamer. We got from old type specimens cuts going back toward that time and had zinc etchings made of them for use in this work.

In such ways it is possible by very little expenditure of money to add considerably to the effect, to make the motif fit the subject matter without distracting attention from it, but rather seeming to fall into the spirit of it, and give it an atmosphere.

I don't know that I have more to say. I can talk about printing for a long time, but whether I can give you anything of interest, I don't know.

I was very much interested in Mr. Garnett's talk at the Rowfanter Club when he spoke of the interest the boys in the laboratory press have in their work. The boys in the ordinary school of printing go out to get jobs as foremen and superintendents and office men, but we said that boys who came to the laboratory press, when they got through the course, seemed to want to buy hand-presses and print books; and he had not less than nine of such books with him—books which the students had printed after they got out of the schoolroom. He teaches printing, but purely as an art. His equipment consists of a considerable amount of foundry type, well selected, and a hand-press. They have zinc etchings of ancient initials sometimes, and sometimes they cut the initials on wood, but their work is simply planned and they *think* a great deal about it as they do it. If "A" and "W" come together, they shave them down so that the spacing is not bad, and do other things of that sort. The work is a joy to see. I don't imagine Mr. Garnett would be a success in delivering work on a production basis. He does keep alive the ideal at which printers ought to aim, that is, the production of printing of almost infinite craftsmanship, which is really entitled to a place among the fine arts.

We give a great deal of attention to the clothing of our bodies, and the shelter we live in; but when it comes to clothing and sheltering our thoughts, few people give it much attention.



New Problems for Manual Arts Teachers

AUGUSTUS F. ROSE

Director of Manual Arts, Providence, R. I.

SOME one has said that the future belongs to the best educated nation and Carlyle says, "The best educated man is one who has touched life at the most places."

When manual arts or manual training was first introduced in this country, wood was the material most commonly used in all communities for the construction of buildings, for furniture making, and carriage building. Those who had the planning and organizing of manual training courses naturally chose wood as the material to be used for this work and the problems or exercises were those that the carpenter, cabinet maker, and carriage maker practiced at their trade. It was not long, however, before some one said, "Why, here, every village and town has its blacksmith who not only shoes the horses and oxen, but makes all the metal parts of carriages, farm

implements, and wagons, and why not give boys some training in working with iron?" So blacksmithing or forging courses were added and bolts, staples, rings, chains, and cold chisels were made. The work thus far was all hand work. Then some one thought that boys should have experience in working with machinery, so shops were fitted up with lathes for wood turning and others for machine shop practice. This type of work, as stated by one of its pioneers, was intended "to improve the intellectual powers of the worker."

Today a great variety of manual activities is offered in connection with a wide range of mental activities, which gives boys and girls the opportunity of making and doing the things they like to do. Manual arts work, as Carlyle says, is given primarily so that boys and girls may have the opportunity of touching life at more points than the formal academic training of the past permitted. It provides school work that is both interesting and educationally more valuable for the vast majority of boys and girls of today than that furnished by the traditional school.

Up to within the last few years wood and iron have been the two materials used in manual arts courses and would be sufficient for our work today if the same conditions prevailed that existed when manual training was first started. Today, however, many other materials hardly known fifty years ago, are widely used in industry and should be given a place in our school shops. Fifty years ago most of our buildings and furniture were made of wood; today they are made of metal. Fifty years ago our vehicles for transportation were made of wood; today our ships, automobiles, trucks, railroad coaches and dirigibles are made of metal. This is a metal age. Metals influence nearly everything we do. We do not realize how much we depend on their use every day of our lives. Our watches, made of metal, tell us the hours of the day, and watch chains make them secure. A knife of metal serves us in many ways. Our table ware, knives, forks and spoons, are made of metal. The keys of our houses, offices, and automobiles are also of metal. Metal is a thing we work for and something we must have to procure the necessities of life. We place our hands in our pockets and if we find metal there it gives a feeling of satisfaction, because we are able to satisfy our wants. If we do not find it there, we must do as the knights of old did when fortunes became depleted.

*"At length when naught remains a meal to bring
The last poor shift off comes the knightly ring
And sad Sir Pollio begs his daily fare
With undistinguished hands and fingers bare."*

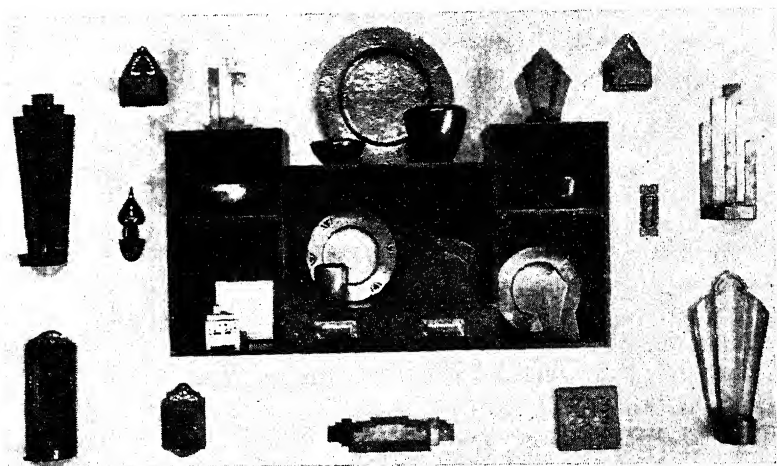
From the earliest times men have recognized the value and usefulness of metals and have utilized them all down through the ages

and today, more than ever before, they are used extensively in the industrial arts, and inasmuch as that fact is true, I feel that there should be a place for a wider use of more of the metals in our manual arts work. While iron and steel have been used in the past and are yet indispensable, copper, brass, bronze, pewter, tin, nickel, aluminum, and even silver and gold, have many possibilities in school work. In using these metals in school work the same processes should be followed as those in use in the industries, so far as that is possible. The first and most important thing for us as teachers today to know and to keep in mind, is the part that design should play in everything we do. Our efforts in the past to teach an appreciation for beauty in the things we have about us are beginning to show results. Psychologists tell us that 90 per cent of our learning comes through the eye gate and that only 10 per cent comes through the ear gate. People are beginning to hunger for beauty. They are now asking for good looking things. They want good looking homes, good looking banks in which to deposit their money, good looking automobiles to ride in, good looking clothes to wear, in fact, they are demanding beauty in everything they use. The real estate man knows that every time an ugly, unattractive building goes up the property around it decreases in value. The store keeper knows that he must make his store attractive, and the manufacturer knows that if he is to continue in business he must spend money to put art into his product. You have heard it said that Mr. Ford spent twenty-five million dollars to put art into his flivver. If we, as teachers, are to keep up with this demand for beauty, we must teach our boys and girls to appreciate beauty. We must see to it that our projects or problems are carefully planned and designed with a sense of fine line and proportion. We must make the environment in which the children live, orderly and beautiful. Even the most elementary problem is improved by giving a little thought to it. The art teacher's work should be more closely related to the shop teacher's work. The shop teacher's problems should be the drawing or art teacher's problems, just as the industrial worker's problems are the designer's problems. Shop experiences should be as nearly like those obtained in the industrial world as school conditions will allow. The progressive manual arts teacher has only to stop and think for a few minutes and many new problems will suggest themselves to him.

I have already referred to the fact that this is a "metal age" and that there should be a greater variety of metals used in our manual arts work. In some of the elementary problems in wood it is possible to combine metal with the wood as illustrated by some of the examples here exhibited.

In working with such metals as copper, brass, bronze, nickel, silver, pewter, tin, and the precious metals, silver and gold, many

processes are brought into use, new to the boy or girl, but commonly used in the industrial world about us. In the first place, there is the mining or extracting metal from the earth, the smelting, refining and alloying, and rolling into sheets or drawing into wire. Then follow the processes involved in working the metal into objects of all kinds, both by hand and by machine. Sawing, filing, raising, chasing, polishing, enameling, etching, engraving, and the making of tools used in these processes. Of course, the problems used in this kind of school work must be adapted to the grade or ability of the pupil and must be of real value to him. The ones shown in this exhibit are those worked



New Problems for Manual Arts
by Augustus F. Rose

out by children in the seventh to the twelfth grades. As I have said before, design is the most important factor in developing these new problems. The boys and girls should do their own designing, and work out their own ideas. They all have ideas enough and need only a chance to express them.

The equipment necessary for working out such problems as you see before you is not extensive, in fact, much can be done with but a few tools. The cost of materials for this work has been a stumbling block to some, but experience has proven, that such materials are no more expensive than wood when their educational value is considered. I would not for a minute advocate doing away with wood, as it will always have its place in school work, but I do believe that metals of various kinds should have their places in all well-planned courses.

One of the most forceful claims for this type of school work is that it gives boys and girls another point of contact with life and helps

them to discover their own interests and abilities and in a broad way decide what sort of work they wish to do in later life.

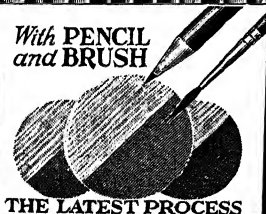
While vocational education seeks to train for gainful employment, manual arts work has no such purpose. It is obvious, however, that there are certain vital relationships that exist between the two and that the manual arts work today, if properly carried out, has much to contribute to vocational education. The real objective, however, is educational, cultural, or occupational guidance. William McAndrew once said "I consider it my greatest duty to bring joy and pleasure into education." When properly handled, manual arts work contributes a full measure in bringing joy and pleasure into our educational work.

The exhibit which you see before you I have brought with me because I know as well as the psychologist that 90 per cent of our education comes through the eye and not through the ear. These examples of metal work will illustrate what I have said and enable you to see a few of the many possibilities there are for this type of work. As I have stated before, the element of design enters into this kind of work to a very great extent and should be given much time and thought before even the most elementary problem is started.

You can get "WASH" effects with MONGOL COLORED PENCILS!



With PENCIL
and BRUSH



THE LATEST PROCESS

No 741

Use these pencils for making sketches, charts, graphs, maps, etc., as well as for the ordinary uses of a colored pencil.

The leads, toughened by a special process are *guaranteed not to break in normal use*, and can be sharpened to needle points in a pencil sharpener for drawing fine lines.

Perfect wash effects are obtained by going over these pencils' marks with a moistened brush!

No. 741 Assortment of 12 different colors—\$1.

Eberhard Faber Pencil Co., Dept. WAO
37 Greenpoint Ave., Brooklyn, N. Y.

Please send free of charge descriptive folder showing the many uses for Mongol Colored Indelible Pencils. These pencils are of especial interest to me and I would appreciate your sending me a sample also free. (If a dozen pencils are desired, enclose one dollar.)

Name

Street..... City..... State....

New Opportunity for Teaching Both Design and Construction in Shopwork

CHARLES A. BENNETT

Editor of the Industrial Education Magazine, Peoria, Ill.

FROM the earliest efforts to make instruction in manual training a part of every boy's education, there has been included in that instruction something to give aesthetic satisfaction. While such efforts at times have seemed to be very feeble, there have always been a few choice spirits among the teachers of this subject who have enriched their instruction with forms of beauty, and there have always been some students who have been inspired to greater endeavor on account of such instruction. At the present time we who are interested in this special branch of education are beginning to gather some of the fruits of thus inspiring youth with ideas of beauty combined with sound construction. In a recent address at the Eastern Arts Association, Frank Alvah Parsons paid special tribute to the manual training teachers because they have been laying a foundation of good construction upon which the superstructure of a new art in furniture may be built.

While it is true that there have always been a few manual training teachers who have been giving some fundamental art instruction in connection with their shopwork, this has not been true of a majority of such teachers, and even today, when perhaps a majority are encouraging the pupils to put forth a little gratuitous effort in the name of design, or decoration, or art, the results seem meager when the possibilities are considered. They are meager, because the teacher too often has no clear conception of what he expects his pupils to accomplish on the side of art, and because his own training in art has been very limited and sometimes faulty.

At the present time, however, when the people of this country are absorbing the art products of industry as never before; when the application of art principles is rapidly becoming a matter of consideration in every home; when we, as American people, seem to be at the beginning of a great wave of art interest which may give us a distinctive national art; when school methods of teaching are encouraging individual initiative; and when the training of teachers is broader; the time seems to be ripe for more rapid progress in combining in practice the ideals of art and manual training, or as our English friends might prefer to state it, in adopting the higher ideals of handicraft for our school shopwork. The present time is auspicious,

too, because the new impulse which we call the modernist movement in art is emphasizing the aesthetic value of fine workmanship, of choice materials, of excellence of finish, as well as simplicity and suitability of form.

If we will assume for the moment the attitude of an automobile driver who looks in the mirror to see what is behind him, while looking forward to see what is ahead of him, we may be able to comprehend more fully our present position in this matter of design in its relation to shopwork, and see more clearly our future opportunities.

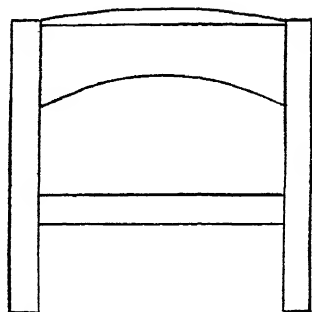
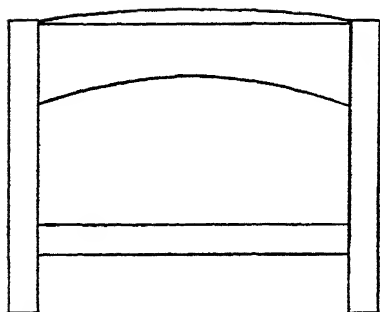
As early as 1876, at the very beginning of the manual training movement in this country, three men in Boston, Professor Channing Whitaker of the Institute of Technology, and two practical woodcarvers, J. H. Fifield and Charles B. Cox, worked out a course of chisel and gouge exercises and taught these to a class of about thirty students, thus demonstrating that a properly organized course of tool exercises, based on an analysis of tool processes, could be taught by methods of class instruction. Each pupil worked through the same series of exercises, as did every other pupil in the class. This demonstration led to other important events in the history of industrial education, but the fact that interests us now is that these chisel exercises consisted of blocks of wood chamfered in various decorative ways and carved on one surface with line designs worked out with a veiner or with a V-tool.

One of the early manual training books, *Exercises in Woodworking*, by Dr. Ivin Sickels of the College of the city of New York, showed various forms of chamfers used for decorating woodwork and described and illustrated methods of making simple mouldings. These exercises were devised in 1881 to 1883. About this same time Charles F. White at Dr. Woodward's manual training school in St. Louis, was working out a series of exercises in wood-turning which involved the study of various decorative forms, including free curves.

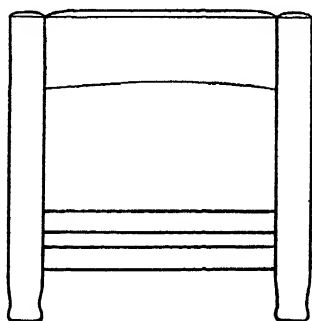
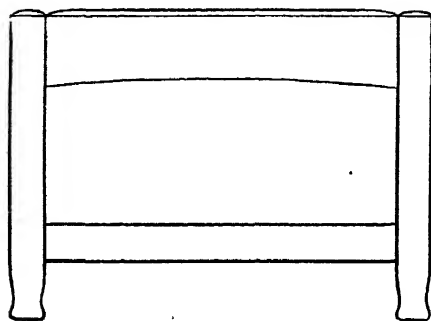
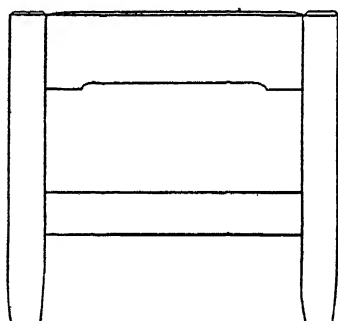
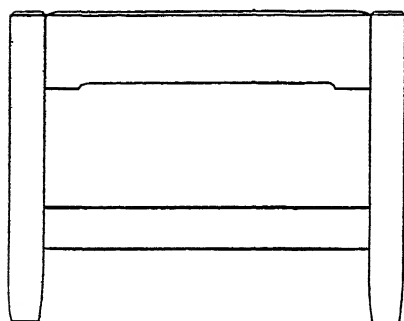
As early as 1888, Professor William F. Decker of the University of Minnesota and the Central high school, Minneapolis, used geometric piercings of rails and upright members in decorating several of the pieces of furniture made by his students. The piercing was done with an auger bit alone, or with an auger bit in combination with a small saw.

Geometric contours of small useful articles were employed by Frank M. Leavitt in Boston in 1893. He also used line carving, and in some cases he employed a stamped background to emphasize certain forms in the pattern. Benjamin F. Eddy in Boston was, at the same time, using geometric contours with considerable feeling of refinement in design, and Gustaf Larsson was emphasizing the aesthetic

1904-8



-Craftsman



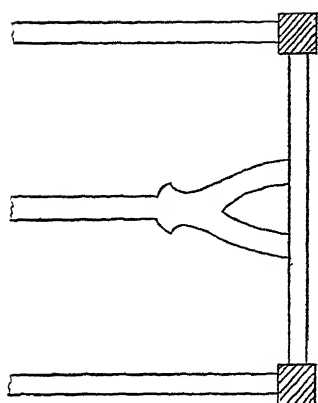
-Richards

value of the free curves and modeling work of his Americanized sloyd.

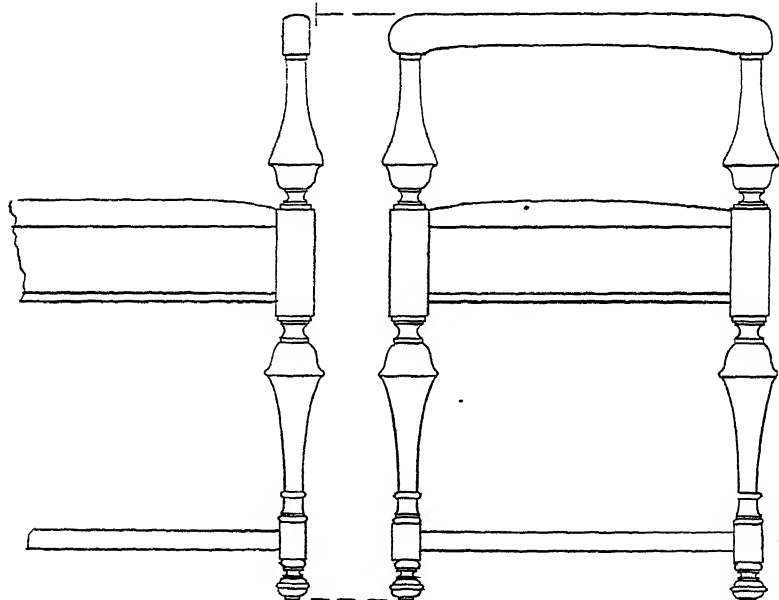
But the idea was growing that pupils themselves must do some of the designing and, during the first few years of this century, a most active champion of this idea was Dr. James P. Haney, supervisor of the manual arts in the public schools of New York city. Two teachers working under him, Harold Peyser and Walter M. Mohr, presented type models or block models to the pupils and asked each pupil to modify the contour in accordance with his own idea of what change would make the model more beautiful. In addition to modifying contours, the pupils designed decorative forms to be carved and stained, or to be painted on the surface of the models.

Then came the influence of Mission furniture and the various activities of the arts and crafts movement. In the classes at Teachers College, New York city, Professor Charles R. Richards was showing his students how to put more refinement into Mission designs, which were then becoming popular in the manual training schools. For twenty years the practice of trying to adapt and refine Mission designs has continued in many schools, while in others a decided departure has been apparent, following the lead of furniture manufacturers who have been producing period furniture and would-be period furniture. Similar school efforts have been made to adapt and refine period designs, but with results that to the critical eye, at least, have usually been failures. The best results from the art standpoint have come when the students have been held nearest to the designs produced by the great masters who created the styles.

Now comes a new impulse in the form of the modernist movement, and with it the freaks that accompany anything so radical in art. But, in this movement, there are greater educational possibilities than in any of the previous movements mentioned. There are greater possibilities because the movement has not brought us a fixed style; it is rather a new style in the chrysalis stage, or, as Edwin Avery Park has said, it is a "multiplicity of styles." It is a movement that goes back to fundamentals and yet encourages individuality in design. It goes even farther back toward the primitive than did the Mission, yet it is not hedged in with traditional forms, as are all of the period styles. At least, it is not at the present time, though possibly it may become so. For the present, at least, it merely lays down certain rather general principles, suggests a few examples, and calls for the best that is in the designer. Surely that ought to appeal to educators. Moreover, a student working under this modernist impulse may have the added incentive of feeling that he is helping to make a future style—perhaps a national style. If he lives in California, he may be helping to make what will some day be recognized as a California style, or, if in New York or Chicago, helping to make what will be-

1924

William and
Mary Seat



—Dhein

come a recognized tower-dweller's style. For the advanced students, and surely for the manual arts teachers generally, there ought to be some inspiration in such an opportunity. It is a project *con moto*, to borrow a musical term.

Looking at this new movement more in detail, we at once find that it has answered the call of the age for something new. Just at the present moment it is revelling in the most surprising, colorful, and sometimes delightful, pieces of furniture for show windows—delightful to look at, but not to live with. They are good advertising media, but most of them do not suggest the quiet and comfort of an ideal American home. There would seem to be a present opportunity to invent, adapt, and refine modernist furniture until much more of these qualities of charm and satisfaction becomes common in the furniture with which we live from day to day.

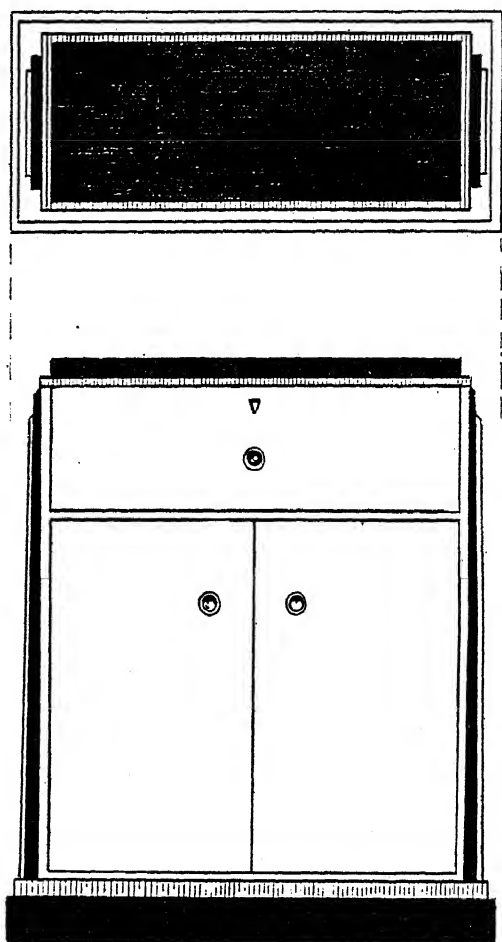
The new movement in furniture has gone back to simpler, larger masses and to longer and less broken lines. In this respect, it is following the lead of architecture. Even the mouldings are being flattened out and are at present taking the suggestion of the set-back motive which is making New York city architecture world-famous. The curves of cap mouldings and also of base mouldings are seldom concave; the over-hang mouldings are replaced by set-backs. These set-back mouldings have not become standardized, and therefore, allow great freedom of proportions, and they are beginning to show some freedom in form. For the present, most of the modernist mouldings produce sharp contrasts of light and shadow, though already we are seeing softened edges and occasionally a reverse curve.

Consistent with the idea of using more large surfaces, is the restriction of surface decoration to all-over patterns in veneers, inlaid borders and jewel spots, and, occasionally, low-relief carving. In all this, color and finish are large factors in the final results. Here, then, is another new educational opportunity—a greater incentive to study color possibilities and quality of finish.

Inlays and color lead to another important consideration in modernist furniture; namely, the materials. Here the choicest woods possessing distinctive color find practical use, also lines or small masses of metal or other materials that are durable and will produce the desired effects. Thus it comes about that there is a demand for a wider range of veneers and small quantities of tropical woods. From the teacher's viewpoint, it offers an opportunity for the practical study of a wider range of materials. On the other hand, modernist designs can be worked out in the white and painted, with results that are entirely satisfactory for many purposes. In fact, the color study with paints is especially suited to conditions in most schools.

To justify the use of fine materials, there must be skilfull working of those materials. Sound construction and perfect joints, both

Modernist Cabinet



— *Varnum*

PLATE 3

inside and out, are the goal of the best modernist craftsmen. This means skill in the use of hand tools and also in the use of the machines, for it is true that, in the modernist movement, there is no prejudice against the machine for what it can do better or as well as the hand can do it. Herein is another opportunity for the educator who believes in training to practical habits and to the appreciation of fine quality in what is produced.

In reaching out to grasp this new opportunity, there is need for caution. As Mr. Parsons said, in his New York address, there is no danger in this new movement as long as we continue to apply our American common sense. The new movement is dynamic, and we surely need that quality in our school work. On the other hand, we will do well to recall what someone has said—that any period of design that has endured since the birth of Christ has had in it the elements of the classic. However, it is quite conceivable that a feeling for proportion, that the satisfactory placing of decorative elements, and that a fine respect for materials may be found in a future style without finding in it the pediment, the colonnade, the pilaster, the over-hanging cornice, and even without the echinus curve. The Romans thought the Greek forms beautiful and so they imitated them—degraded them—and used them for ornament when structurally they were not needed. Most occidental peoples have done the same thing. We have all worshipped at the same shrine. We have no need for these same Greek elements except as they satisfy our desire for beauty. Is it not possible that, with our new materials of construction and our new mode of living, we will be able to develop enough genius to work out a more fitting American constructive art that is also beautiful?

If this is possible, then the teachers of design, whether in the art room or in the workshop, have a great opportunity to help in bringing this about. Art development requires purchasers, appreciators, as well as designers, producers. We are in a large measure responsible for the fundamental training of both.



Jewelry and Metal Work

Equipments and Supplies
Tools of All Kinds

Silver, Gold, Copper, Brass and Pewter
in Sheet and Wire Form

Send for information about Etching Materials.
Our Brochure "Things In and About Metals"
sent for the asking



METAL CRAFTS SUPPLY CO.

PROVIDENCE, R. I.

Is the Machine Displacing the Worker? If So, Where Does the Worker Go?

HARRY E. BLYTHE

Assistant to the president of the Goodyear Tire and Rubber Company, Akron, Ohio

LADIES and gentlemen, I think it is mighty fine that a group such as this is interested in a subject such as the subject which has been assigned to me. This subject is probably the most important economic subject before this country today. It is a subject which, when you start thinking about it, seems to take you around in a circle.

The industrial organizations of the country are primarily interested in this subject because it affects them so vitally. The educational institutions are becoming more and more interested in it because they realize that the matter vitally affects them. Industrial and Educational institutions are becoming more closely related than ever before, because more and more they realize that their interests are common.

I could very easily talk to you on the subject of industrial education, which I think would be very interesting, and tell you what a company like the Goodyear Tire and Rubber Company is doing along this line, but that is aside from the question which I do want to discuss.

Foreign representatives coming to this country, to study our economic condition, are amazed at the prosperity of this nation; they are amazed at the wealth of the individual workman, wealth which only the higher class, kings and queens and royalty had in foreign countries, Europe, Asia, and elsewhere, only a few short years ago.

In that respect, I am reminded of a story which I think illustrates the general trend of mind of the American. The story is told of five men who went to South Africa to hunt elephants. One was a Pole, one was a German, one was a Frenchman, one was an Englishman, and one was an American. They had a very successful hunt. On the way back, on the boat, they decided that they ought to write a book, each one of them telling of his experiences. Each one of them then proceeded to write a book, and each gave the book a title. The title of the Pole's book was "The Elephant and the Polish Question." The subject of the German's book was characteristically stolid. It was just, "The Elephant." The title of the Englishman's book was, "The Elephant and His Habits." The Frenchman called his

book, "The Elephant and His Amours." And the American called his book, "Bigger and Better Elephants."

We are only interested in bigger and better things, and this question, "Is the Machine Displacing the Worker? If So, Where Is the Worker Going?" will determine largely whether or not we continue to go forward with bigger and better things, as we have during the past century or so.

The machine has brought about mass production. Mass production has brought about lowering of cost through higher efficiency, which has made it possible for more people to buy individual articles. Mass production has brought about mass distribution, mass sales.

Now it is an interesting fact today that those two things are in direct conflict with each other. The productive capacities of industry have been brought to the point where it becomes a problem of distribution to be able to keep pace with the production capacities.

Up to 1920 we were faced with only one problem and that was a problem of production. There wasn't an industry in the United States for a period from 1907 until 1920 that didn't sell almost anything that it could make. There was a continual shortage in capacities. And then the slump of 1920 came along; with that slump came a complete reorganization of every phase of business in every line, and efficiency was the by-word. The engineering departments, the research departments, the machine design departments, the efficiency departments were given the job of lowering costs, and they have done it excellently. They have done the job so marveously well that the capacities have been doubled, tripled, even quadrupled in the same amount of floor space, with the same amount of investment which we had previous to 1920. This has placed a tremendous burden upon the sales departments, the distribution departments, to sell the output of the production departments.

The problem of today is a problem purely and simply of distribution, and with this increase in productive capacity the distribution departments have had to bring out new models, new designs, new types, and so forth, to the point that instead of having mass production today, of one type, which lent itself to high efficiency, we have large production, but we have many types, which fact has a tendency to lower efficiency. It is for that reason that mass production and mass distribution are in conflict today.

Now, I think, to get at this subject matter, I shall review for just a moment or two, a little of economic history. In the beginning we had what economists please to call, direct appropriation, or hoe culture. In other words, primitive man went out and appropriated so much land, and then, by means of primitive farming with the rudest of instruments, he ploughed his ground, and planted a few seeds from which he got a small harvest. He also hunted a little, which

furnished him meat. Such primitive methods of creation, or control of food supply, naturally limited the population of the world.

The second stage is called the pastoral stage. The hunter began to domesticate some of the animals, which were in the vicinity, and it didn't take him long to realize that those animals could be put to work for his benefit. By so doing, he was able to cultivate a greater amount of land, and to plant a greater amount of seed and grain. That made it possible to support a great many more people. During this period began the accumulation of wealth.

The third stage is the agricultural age, which was just a simple and natural growth from the second stage. Man's power was increased by beginning to harness the powers of nature. In this stage began private ownership, and slavery, and the development of villages and towns, where people began to congregate together.

The fourth stage is called the handicraft stage. Cities developed from the towns; these became centers of trade; guilds were formed. Domestic system began to take form. The agricultural system grew and grew until it covered acres and acres of land under one man's ownership. This brought about the mercantile system. A man found that instead of trying to grow or make everything that he needed he could specialize; he could concentrate on growing or making certain things, and then by barter, or trade, he could go out and get what he wanted. This type of intercourse brought about the creation of money.

The fifth stage is the industrial stage, and that brings us up to the present stage which is governed absolutely by the machine.

The history of most nations is written either with the sword as a pen, or it is written in political intrigue, but the history of the United States is written absolutely through industry.

There are three elements necessary in any industry: capital, labor, and natural resources. The picture of those three tied in today as compared to a hundred and forty years ago, the beginning of this republic, is vastly different. In 1789, at the beginning of the republic, the national income was less than four hundred million dollars; the the national wealth was slightly over five hundred million. Today, the national income of the United States is over eighty billions of dollars, and the national wealth is over three hundred and thirty-six billion. The population during that same period has increased from three million to approximately a hundred and twenty million.

In the early history of this country, the prosperity was due to the natural resources, but we were extremely wasteful, which resulted in dissipation of these resources. Today we have changed to the point where we are conserving our resources. In the beginning, capital was scarce. Today, capital is very plentiful. In the beginning, labor was scarce. Today, labor is also plentiful. There is a shifting of balance there, but the shifting of that balance brought about an increase in

production. There are a great many causes given as to why this country is so prosperous today.

I said in the beginning that economists from foreign lands come over here to study the wonderful prosperity of this country. But they somehow, do not get at the cause—they only see the result. They do not visualize the fundamental things which have brought about this tremendous prosperity in this country. They lose sight of these because their economic problems are so vastly different from the economic problems of this country.

Some of the causes given for the great prosperity of this country during the past four years are: President Coolidge, the Reserve System, economic services, high wages, and so forth, but again those are results and not causes. We must get back to the effect of the law of cause and effect, and we must go beyond the things which are on the surface in order to find out the whys and wherefores of this prosperity.

It is almost a paradox when we think of all this prosperity brought about by high wages, yet, in the face of these high wages we have at the same time falling prices, shorter hours, increase in profits—if there is any more of a definite seeming paradox than that, I hardly know what it is, and yet this is the definite proof of what the increase in the productivity of labor, which has brought about an increase in the quantity of production, has brought about.

Research is absolutely essential in any industry if it is going to keep pace with the times today. The leading industries of today all have their research departments, both chemical and physical. They have their machine design departments, they have their mechanical departments, they have their commercial research departments. These departments are studying every phrase of industry, and business, in order not only to keep pace, but to step out a little in advance of the other fellow.

Now, what is research? Well, research, in plain language, is trying to get something from out there in here, and that is about all there is to it. Some of the problems of research take years and years. A story comes to my mind of a job that we have been working on in The Goodyear Tire and Rubber Company. In 1915 we set out to design a continuous tire building machine. We spent over a half million dollars on that machine in the following six years, and it was scrapped in 1921, as being absolutely a failure. Yet within the past year due to the changes in process brought about by the development in tire manufacturing we have again brought into the picture the possibility of continuous, automatic tire building machinery, and today we are sure that we will develop it to be a success.

I heard Mr. Kettering, vice-president in charge of research for the General Motors, tell the story of the development of Duco. It had its beginning in a conference with a number of paint experts.

Until the development of Duco it took thirty-nine days to paint a Cadillac automobile, and it took nineteen days to paint a Buick automobile, owing to the length of time necessary in drying the various coats that were put on.

Now, with the Buick Company producing 1200 to 1500 automobiles a day, taking nineteen days to dry, it doesn't take more than simple arithmetic to realize the amount of storage space they would have to have to store the number of automobiles that they would be drying, and it doesn't take much mathematics to figure the number of square feet of storage space they would have to have in drying Cadillacs, which took thirty-nine days. Just think of the amount of money involved in tie-up in inventory.

Mr. Kettering called a group of paint experts together, and he put the problem up to them. After a hot discussion they decided that they might be able to cut two days off the Cadillac job, and a day off the Buick job, and he was so disgusted with them that he broke up the meeting and dismissed them. One fellow said, "Well, Mr. Kettering, how long do you think it ought to take to paint a Cadillac automobile, or a Buick automobile?"

He said, "If you want my honest-to-God opinion, I will tell you, just one-half hour." And they thought he was crazy.

A short time later he was walking down a street in New York. He was attracted by a window display, with a little pin tray which was very beautifully painted and highly colored. He went in with the passive idea of buying it, to take back home to his wife. When he looked at it he found that it was apparently a different type of paint, and he asked the man where he got the trays, and who painted them. The man in charge told him. He purchased the tray and then went to the man who painted them, and asked him what kind of paint he used. The man showed him some of it. He asked him where he got it, and he said that he made it. He asked him if he couldn't buy a couple of gallon of it. The fellow said, "There has never been that much made," but he finally made an agreement with him to make that much of it. He said, "What do you want that for?"

Mr. Kettering said, "I want to paint an automobile door with it."

After attempting to paint the automobile door by the use of a spray gun, he found that his problem was not a problem of drying too slowly, but a problem of drying too fast, because when he shot it out of the spray gun, the stuff was dry before it hit the automobile door. It took the General Motors Corporation nine years to slow up that paint in a manner satisfactory enough to paint, yet today you can drive your car into an automobile shop, have it painted beautifully, and drive it out tomorrow. That is what the development of Duco paint has done for the automobile industry.

Today a banker might tell you that research men are dangerous because they scrap and apparently waste so many things, because their new discoveries and developments bring about obsolescence. Yet obsolescence has a great deal to do with the prosperity of America, and obsolescence is brought about not by the research man, not by the manufacturers, but by the individual.

Obsolescence, in many instances, only comes in our own minds. If you want to prove that, consider taking a brand new automobile of today, and sealing it in a glass case. What will it be worth ten years from today? Theoretically, it is worth as much as it is today, except in your own mind. Refinements have come into the picture, with the result that it is obsolete.

There are, at least, two reasons why each one of us should be interested in this present problem which we are discussing; first, because by studying it and analyzing it, we are going to become better business men. We are going to understand the fundamental things which underlie every business, because this problem is at the bottom of every business; and the second; through that knowledge each and every one of us is going to be made a better citizen.

In working up the material for this talk, I did quite a lot of studying, reading and research, and out of this study and research I have arrived at twelve things which the critics say are wrong with machine civilization. First: Machine civilization is uncontrollable by man. In other words, there is no limit to it.

Second: Machine civilization destroys both the natural beauty, and the natural wealth of man's environment.

Third: A machine civilization robs the world of local color and local character, and leads to uniformity; in other words, we get down to the point where we don't have individual ideas any more, we don't have individual homes any more, we are tending toward standardization instead of individualism.

Fourth: Machine civilization enables man to get about faster and go farther, but transportation is no longer under the close control of individuals and local communities.

Fifth: Machine civilization destroys skilled craftsmanship.

Sixth: Machine civilization throws men out of work.

Seventh: Machine civilization makes things for sale, rather than for use, and that incidentally is a new thought. It used to be that nobody ever thought of making a thing until there was a demand for it. Now we make a thing, and then we go out to sell it.

Eighth: Machine civilization breeds class antagonism. Machine civilization has done more in the development of unions in the various crafts than any other single thing.

Ninth: Machine civilization encourages waste.

Tenth: Machine civilization causes lack of interest in good management and good industrial government.

Eleventh: Machine civilization changes men from being self-reliant persons to helpless individuals.

Now if these are signs, they are signs of a pioneer period, and they are signs which we go through in pioneering a new development in the course of civilization. Already there are a lot of corrections at work. Instead of centralizing industry, we are decentralizing industry. The critics say that it brings about the centralization in one mass with all the evils of civilization tied up in that thing; actually, we are beginning to decentralize.

If you will pardon personal reference, take The Goodyear Tire and Rubber Company. What have we done in the past three years? We not only started a plant in Canada fifteen years ago, but we started a plant in California ten years ago, and three years ago a plant in Australia, and a plant in England. Now we are building a plant in the south, and we have men at the present time surveying the situation down in the Argentine, with the idea of putting a plant down there.

Now that is not alone the work of The Goodyear Tire and Rubber Company. It is being done by various other industries. They are finding that as they build up a demand for their product in a certain locality large enough to justify an economical production unit, it pays them to put a plant in that locality to decrease the cost of distribution.

Now what is becoming of the men who are displaced by the machine? (The second half of the question). I won't attempt to say to you that the machine is not displacing the man. It is. It has. And it will continue to do so.

In our industry, The Goodyear Tire and Rubber Company, in April, 1920, employed 33,000 people in the factory, and we were manufacturing 33,000 tires a day—one tire per man, per day. In April of this year we employed 18,000 people in the factory, and our daily average production was 72,500 in the same plant, an increase of from one tire per man, per day, to almost four tires per man per day. And who has benefited by the increase in efficiency? The consuming public. Never in the history of the rubber industry has rubber merchandise, tires in particular, been as low in individual cost to the consumer as they are today. Secondly, ten years ago a tire that ran 10,000 to 12,000 miles was considered to have given very good service. Today, any of you who don't get 20,000 or 30,000 out of your tire, bring it back for an adjustment.

But, again, where are the men going whom the machine has replaced? This is where a few of them have gone.

In eight years, radio has taken on 150,000 people.

Electric refrigeration has taken on 100,000 people.

Aeronautics, development of trucking, bus transportation, motion picture theaters have taken on over 1,000,000 people, as compared with eight years ago.

There are 250,000 more teachers and professors today than there were eight years ago.

Hotels and restaurants have increased their personnel by over a million.

Barbers and hair dressers, primarily because of the women, have increased their employment by over 200,000 people.

Clerical help (and this is an interesting thing, as we decrease the number of machine workers we increase the number of clerical help, and that is an actual fact in industry) has increased over 500,000 in personnel.

So far, we have been able to take care of all the people who have gone out of various jobs because of the machine. The question is: how long can we continue to do that?

A year ago you could hardly pick up a newspaper, or a magazine, or seldom hear a speaker any place who wasn't discussing this subject which I am discussing today.

Is the machine replacing the worker? And, if so, where is he going? But in the past five or six months you haven't heard so much about it. Why?

A year ago we were faced with a non-employment problem. There were between 4,500,000 and 5,000,000 people out of employment in this country, almost 20 per cent of the total number of working people. That is a very high percentage. Today, there is no unemployment, so to speak. That is the reason we don't hear the subject. But as we get into unemployment periods the subject is bound to come up, and it is well that we should study it, and understand it, in order to face such problems when they do come up.

It is an interesting fact that the greatest production has come about in the production of luxuries, and not necessities, and why has that been the case? And where do those luxuries go? They are going to the working class, and that brings down this fundamental thought, and the reason that industry is so vitally interested in this subject; an idle man means the loss of a sales potentiality, and industry cannot afford to continue the development of the machine, and the throwing of men out of work unless industry can absorb those men in some other phase, because it is defeating its very purpose in so doing. If it does that to the extent that the workers cannot be absorbed, it loses its market; if it loses its market, production automatically goes down, and costs go up. That is the reason I said in the beginning that this subject works around in a circle, and it is very difficult for

us to fully understand the whole thing from an economic standpoint unless we go into it at some length.

Now the question is whether or not these various industries which I have mentioned, that have absorbed so many, many of the people in the last eight years, are adequate to continue to absorb them all.

Well, this is both a social problem and a business problem. It is one that we must study from both those angles. There is no definite answer to it. It is an answer which must be brought about by the co-operation of every business man in the United States.

Our problem is altogether different from the problem of Europe or Asia. There it is still the problem of bare existence. Here it is a problem of maintaining the tremendous high standard of living which has brought the luxuries to the working class.

I traveled through Europe two years ago, and I was amazed at the poverty. Most Americans traveling in Europe have no conception of the real economic picture of Europe and Asia, because they only see the city life, and they only see the high spots of the city life; they only see the extravagance and the wealth, and they don't get down into the working class and the poverty involved. I have never seen in the United States any place, in my period of life such abject poverty as there was at that time in France, Germany, Italy, England, and Scotland. Their problem is altogether different from ours; their problem is what our problem was a hundred years ago, barely eking out an existence.

Our problem, to repeat, is to continue this great mass production; this great mass sales, which gives us a product at a low cost, which gives us high wages, which gives us shorter hours in order that we may benefit by, and use the luxuries which we are able to buy.

Capital must not, after building great industrial organizations, shut down its mills. That way lies dry rot, not only for the industry, but for the country. We must go on fearlessly, scrapping our old methods, our old machinery, as we can develop through research, new and better methods, and new and better machinery. We cannot afford human and business waste. We must continually bring in new inventions, we must develop men who can bring in new inventions to continue to lower the cost, to continue to make it possible to increase mass production, to continue to make it possible for the buying public to absorb this mass production.

Mechanical industry stands and will remain a monument to American inventiveness and business genius, and it should be an inspiration to all of us for further achievement.

It seems to me that one of the most amazing things about American industry is the fact that we can do things that our neighbors in foreign countries say cannot possibly be done. After the war,

they said, you cannot possibly absorb the great productive capacity which you have developed in the past four years, yet we did. We not only did that, but we doubled that capacity. They told us after the war that we couldn't possibly continue to manufacture two million automobiles a year. We have not only continued to manufacture two million automobiles a year, but we have increased that capacity until last year we manufactured four and a half million automobiles during the year, and if we continue for the rest of the year as we have done so far in 1929, we will produce six million automobiles this year; the first quarter was over a million and a half. It is an assured fact that we will go ahead of last year which was four million, and a half, to at least five million this year.

We are told that American industry cannot possibly go on increasing efficiency and the development of the machinery, but, ladies and gentlemen, if this country is to increase in civilization, if it is to hold its position of leadership among nations, in civilization and all the things that go with civilization, it must go on, there is no middle ground, we must continue increasing the standards of living, increasing the happiness, creating a civilization which has never been known in the past.

Now this is a problem and a challenge to each and every one of us; American industry will retain its championship only so long as it is capable of carrying on this program. We will fall by the wayside as other nations have done in history if we don't, and our problem today is more severe than it ever has been because it is the history of industry, and it is the history of nations that they begin to fail at the period of their highest prosperity.



Keeping the Related Subjects Related

R. W. SELVIDGE

Professor of Industrial Education, University of Missouri

THE terms "related subjects" and "related information" have come into general use through being employed to designate that type of academic instruction for which compensation from state and federal funds may be received. It was recognized that the development of skills did not afford a sufficient training for a vocation and thus phases of academic work which are involved in the successful practice of a vocation were included in the course of instruction for which local school organizations might receive reimbursement. We should not overlook the fact, however, that the terms represent a type of work rather than the fact that the local school

may receive a subsidy to cover part of the expense of this kind of instruction. These terms may mean not only those phases of academic instruction necessary to success in a particular vocation, but may mean as well all that field of information and knowledge that is directly related to, or motivated by, the work in the manual arts shop. This discussion is based upon the larger conception of the term. The same principles of teaching apply in either case, and the methods will vary in minor details only.

Difficulties in Teaching Related Subjects

Many difficulties are encountered in teaching such material. Some of them arise out of the variation in the abilities of the individuals, their unequal advancement, and previous experiences. Another group of difficulties arise out of the character of the material, the want of a proper analysis of the situation, and an attempt to apply theories of teaching where they are not applicable, or in a manner that is not effective.

Individual Instruction Necessary

Every teacher, whatever his subject, recognizes the wide range of individual differences and in no kind of work is it more readily discernible than in industrial work. There appears to be a popular notion that individual instruction may be necessary in shop work where the difference in the progress of pupils is so easily observed, but that it is not necessary in other phases of training. As a matter of fact the variation in the progress of pupils in the other subjects is just as great as it is in the shop work, but we are better able to measure the degree of progress of work in the shop by an objective examination of the work accomplished. We have great difficulty, however, in measuring accurately the progress of individuals in academic subjects, and, even when measured, teachers often appear to be unable to grasp the significance of the variation in the accomplishment of individuals in an academic group.

The unequal advancement and previous experiences of pupils must be an important factor in our teaching plans. The fact that a group of pupils have completed the same grades in our public schools does not assure us that they are even approximately of the same degree of advancement. Throughout their school career they have been advanced with a group and without much respect to equality of attainment. The matters of outside experience and maturity also constitute an important factor. Irregularity of attendance and variation as to the time of entrance both have an important influence upon the attainment or progress of the pupil. All of these factors contribute toward making individual instruction necessary.

Individual instruction is necessary for any satisfactory solution of the problem, but individual oral instruction is very expensive,

impracticable, and in many respects inefficient. A teacher who relies upon individual oral instruction can handle only a small number of pupils, and the cost is out of all proportion to the value of the instruction as compared with other plans. Even with a very small group it is impossible to give instruction just when it is needed and just to the extent needed. When a student is absorbed in a particular task, he is at that time interested only in the instructions that will enable him to perform that particular task, and oral instructions in excess of that are quickly forgotten even though they are individual instructions. In the case of oral instructions we must rely upon the memory of the pupil to retain them until they are needed. This memory is aided by immediate use, but we cannot always take advantage of this factor by giving immediate application to all facts presented. We are notoriously inaccurate, diffuse and verbose in our oral instructions, and pupils are even more inaccurate in their understanding and recollection of our instructions. For these reasons it appears to be unwise to rely to any considerable degree upon individual oral instruction.

It is not suggested that class or group instruction is undesirable. Under certain conditions it is highly desirable. When the entire group needs the same instructions at the same time class instruction is economical and effective and often may be used in cases where the instructions are not based upon previous training or experience. Group meetings also tend to develop an *esprit de corps*. However, the limitations on class instructions are so great that some means must be devised to provide for individual instruction.

The Written Instruction Sheet Is Best Solution

In order to meet the requirements of the situation some system of individual instruction must be devised to overcome objectionable features of oral instruction. The written instruction sheet appears to offer the most satisfactory solution to the problem and when carefully prepared serves the purpose admirably.

One of the most important steps in securing good work from a pupil, or from anybody else for that matter, is to assign him a task with specifications so definite that there can be no doubt about what is required. Indefinite and inexact assignments are the most prolific causes of failure, both in school and out of school.

When an individual is given accurate and exact assignments he not only knows what is required, but he knows he can be checked upon every detail. He realizes that certain responsibilities are fixed upon him and he is much more likely to try to live up to them than he would be if the assignments are indefinite as to their requirements. In this respect the written assignment has a very distinct advantage over the oral assignment. In making a written assignment we are

much more likely to be accurate and complete than when it is made orally. The written assignment carries with it the feeling of much greater exactness, and the pupil has no occasion to rely on his memory or some hastily written notes. Under such circumstances the pupil not only feels constrained to do more exact work, but he gets greater satisfaction out of it. We all have felt the exasperation that comes from the assignment of a task where the requirements in the assignment are indefinite, and yet we know that we will be expected to conform to the unrevealed requirements in the mind of the one who made the assignment. The written instruction sheet is an admirable means of correcting this difficulty in instruction, and this part of the instruction sheet must be handled with the greatest care. Perhaps the most satisfactory type of instruction sheet for use in teaching related subject matter is what is called the "assignment sheet." The form of this sheet varies with the type of school and the subject matter treated. An assignment sheet dealing with arithmetical processes would differ in some details from one dealing with the investigation of an industrial plant or process.

In general, assignment sheets should be made up of three principal parts:

1. A definite statement of the assignment.
2. A definite reference to the source of information and suggestions as to the methods of procedure in getting it. This may include a statement of the facts or principles involved in the assignment, together with examples of their application.
3. Questions or problems to direct attention to the particular points to be covered, or to give practice in the application of the principles involved.

Undoubtedly, many teachers who are fond of educational theories, will maintain that the pupil should be required to make an outline for his study or investigation, but long experience has convinced me that in the beginning it is wiser to teach the pupil the use of tools rather than to teach him how to make them. In this and similar cases, after the pupil has used an outline, he will be more easily convinced of its importance and value. It is better to avoid introducing too many elements into one problem, even if there is a logical connection. The matter of teaching a student how to develop his outline may come later, after he is familiar with its characteristics and use.

In the preparation of assignment sheets for the study of industrial plants there will be considerable variation in the points about which information is desired. The source of information and the method of securing it might vary also. The directions should call the pupil's attention to any available reading matter dealing with the subject, and he should read this before making inspection.

In the assignment sheet for arithmetic and science there should be a definite statement of the assignment, a careful and exact statement of the principles involved, or the rules to be followed, together with an adequate explanation and examples of their application. These should be followed by a series of problems involving the application of the principles.

ASSIGNMENT SHEET

Arithmetic

Assignment: To multiply together numbers when one or both of the numbers contain a decimal.

How it is done: Proceed to multiply as in multiplication of whole numbers and point off as many decimal places in the product, counting from the right, as there are places in the multiplier and multiplicand.

Examples:

(1)	(2)	(3)	(4)	(5)	(6)
.3	.12	.042	.6	.14	.06
2	3	3	.2	.3	.04
—	—	—	—	—	—
.6	.36	.126	.12	.042	.0024

By counting the number of decimal places in the multiplier and multiplicand of each example it will be found that there are exactly the same number of places in the product. When the multiplication was completed, in examples five and six, there were not as many figures in the product as there were decimal places in the multiplier and multiplicand, and it was necessary to prefix ciphers to give the required number of places.

If you remember that there always must be as many decimal places in the product as there are decimal places in the multiplier and multiplicand, you will have no trouble in the multiplication of decimals.

Your Job: (1) In the following examples count the decimal places in the multiplier and multiplicand and see if the decimal point is properly placed in the product:

.60	.07	.0027	6.21	3.42
.8	8	.02	.14	2.5
—	—	—	—	—
.480	.56	.000054	2484	1710
			621	684
			—	—
			.8694	8.550

The following problems should be solved on your work sheet and turned in to your teacher with this assignment sheet.

(2) Complete the multiplication in the following problems and place the decimal point in its proper place:

3.65	.124	.004	68.4	1.21
.24	.003	.002	.26	5
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>

Check your work by adding these products. The sum of all the products should be 24.710380.

(3) If an apprentice receives 29 cents an hour, how much will he receive per week if he works eight hours a day for six days?

(4) If one brick weighs 7.26 pounds, what will a load of 825 bricks weigh?

(5) The circumference of a circle is found by multiplying the diameter by 3.1416. What is the circumference of a pipe whose diameter is 6.5 inches?

These problems, requiring an application of the rule, may be continued as far as desired, but in general it is advisable to give only a few general problems on this sheet. It may then be used for all groups, and sheets of supplementary problems should be provided dealing with the particular phase of work in which the pupil is engaged. There is an advantage in taking the supplementary problems from the type of industrial work in which the pupil is interested.

Corrective work in English is easily handled by the use of the assignment sheet. There are a number of errors so common that sheets should be prepared dealing with them, and when the error occurs, the pupil should be given the assignment to enable him to overcome this particular bad habit of speech. A very common error is in the use of the forms of the verb *see*. The following assignment sheet illustrates a method of handling this particular error:

ASSIGNMENT SHEET

English

Assignment: To learn to use correctly the words *see*, *saw*, and *have seen*.

How to do it: *Saw* is always used alone and *seen* is always used with a helping verb such as *have* or *is*. Watch your speech in order to be sure you follow this rule. The best way to correct an error in the use of English is to use the correct form so many times that you become accustomed to it, and then watch your speech to see that you do not fall into the old habit. *You* are the only one who can cure this defect in your use of English.

In the following sentences the words are used correctly:

I saw you at church Sunday.

I have seen three robins today.

He *saw* the parade.

We *have not seen* him this week.

They *saw* the new moon through the trees.

They *have seen* better days.

I saw you at school today.

I have seen you at school every day this week.

We *saw* a big fire this morning.

I saw an uncle today *I had not seen* for years.

Have you seen our new automobile?

You should *have seen it*.

Your Job: On the attached sheet you will find a number of sentences with blank spaces in them. Fill in the spaces with the correct word.

Examples might be multiplied, but the variation would be in form and not in principle. The essential thing is to assign a definite task, make available all necessary information and material for performing it, and then place the responsibility on the pupil. Where practice or drill is involved, this must be provided for in the assignment.

The preparation of instruction material in this form requires the greatest care in both the selection of the material and in the method of handling it. In the first place we should select the more important items in which the pupil may require instruction. These should be selected without respect to the ordinary conventional division into subjects. A pupil is not interested in learning a thing because it is listed under the head of physics, but because it helps him in the performance of a task. Pupils are much interested in the facts of life and the laws of nature when they are related to the work they must do than when they are placed in some logical, artificial grouping as a school subject. It is better, therefore, to select the units of instruction on the basis of the pupil's work and needs than with a view of presenting the material gathered together in the ordinary text book. In considering the problem of the distribution of a load with respect to its supports, the pupil is not interested in whether it is arithmetic, physics, mechanics, or graphic statics.

In the matter of presenting the units of instruction the direction of emphasis is important. Herein lies the chief difference between the work for the part-time or the trade school and the manual arts work. For the boy or girl in the part-time or the trade school, the period of formal education training probably will be short. For such pupils it is far more important that they know a principle, or law, and have an opportunity to apply it, or see it applied, in a great many situations,

than it is to know why it is true. It is more important for them to know how a thing acts under certain conditions than why it acts so. Scientific theories often are quite beyond the comprehension of these young people, and if understood, would be of little practical value. For example, it is far more important for a prospective mechanic to know that heat will cause metal to expand, within certain limits, and that this is a very powerful force which must be taken into account in work where metals will be subjected to considerable heat than it is to know the theories of molecular structure. It is more important for the steam-fitter to know that the pipe will expand when heated by the steam, and how to make provision for this expansion than it is that he should understand the theories of heat.

In the case of the manual arts pupil the chances are that he will continue in formal school training for a somewhat longer period and will have greater opportunity and more occasion to inquire into the why of things and less reason to know the how of things. It is just this theoretical side of training, however, that leads to the criticism of schools as being impractical. Perhaps we should have both, but the time limit for the part-time or trade pupil makes it impossible to give any considerable amount of training in both the theory and the application, and when it comes to a choice between the two, the practical should be favored for this group. In the manual arts group both phases may receive attention.

Instruction sheets will not reduce the work of the teacher, but they will make his work more effective. They are in no sense a substitute for other teaching devices and materials, but are a means of making such materials and devices more effective. They make possible the instruction of any pupil at any time he needs the instruction, and a genuine relation can be established between the subject matter and the practical job. The assignment sheet may be used with equal facility in the shop in connection with a job or in the classroom. In part time work, where the entrance and attendance are both irregular, assignments may be made promptly and without loss of time to the pupil. He may be kept busy on worthy work at all times. Delays in assignments are fruitful causes of dissatisfaction and disorder. This method of assignment also makes it a simple matter to keep an accurate record of the pupil's progress.

“Measurement of Executives”

JOHNSON O'CONNOR

General Electric Company, Lynn, Massachusetts

IN almost every talk that I have ever given I have tried to emphasize the importance of ability, almost inborn ability. Professor Selvidge says that when he was born he could neither write nor speak. Perhaps these born abilities are not quite as important as I thought they were, but certainly when one can learn to speak with such **charm, they are not quite as important as I have emphasized.**

Seven or eight years ago the General Electric Company organized a department to try to study the aptitude of youngsters in an attempt to place each boy who came to work for them on that particular type of work for which he was naturally best fitted. Being an engineering organization, we have attempted to go at it in an engineering way, and made up a set of what we call “sample jobs” or “work samples.”

We are trying gradually to make a representative sample of each type of work we have, so that when a boy comes to work for us he can try a dozen samples of a dozen types of work and get some idea from the way he does the sample, the way he will do the work.

I have brought here one or two of the samples we use. Here, for instance, is a board with a shallow tray at one end and a hundred holes drilled at the other. We ask a man to come into our laboratory and take up these little one-inch pins; this measures finger-dexterity work, and a man who does it well will make good on meter assembly work, or instrument assembly work.

Here is another sample which we use for clerical work. There are two columns of numbers; the first two numbers reading down from the top are 96 and 96; we ask a man to make a check-mark in the third column under the word “same,” and the next are 64 and 68, and we ask a man to make a check in a fourth column—and check the word “different.” And given the length of time that it takes a man to check the numbers either same or different, we find that the whole group of clerical workers, accountants, stenographers, and so forth will do that thing well. On the other hand, people who do it poorly, very seldom make good at clerical work.

Here is still a third sample: We show a man this block, tell him that it is made up out of nine wiggly blocks; we tell him it was cut through in three piles with three blocks in each pile and three layers with three blocks in each layer. We mix them up and ask a man to put them back together again. That is supposed to represent mechanical work or engineering work or designing, drafting, any type of work which requires ability to see three dimensional structure. There

are a great many men who can see a blueprint and not visualize in three dimensions the thing they see there in two dimensions. We wanted to measure ability to visualize three-dimensional structure.

Let us run through step by step the development of a test of this kind. We wanted something which a good mechanic would do well, which would not measure mechanical knowledge or training, but would measure almost the inherent gift of a mechanic. So we made up something that we thought a good mechanic ought to do well, simply reasoning the thing out as well as we could, almost guessing at it. Then we asked a group of men we know are good mechanics, regardless of what they do on our particular thing, men who have been good mechanics in many cases for ten or fifteen years, to come out and try out the sample of mechanical work we made up. They did it poorly, which meant we had made a mistake in our reasoning. The fact that they did our particular test poorly showed that the test was not a fair representative sample of mechanical work, so we scrapped it, and made another one, and again we asked good mechanics to come in and try that. Again they did it poorly, and again we scrapped it and made another. We made nearly thirty samples in that way before we finally found something that men we know are good mechanics actually do well, that men in general do poorly. That gives us a mechanical objective way of separating men we already know are good mechanics from people in general. Those good mechanics may have done it well for one of two reasons; they may have done it well because of their training, or they may have done it well because they were naturally good mechanics, because they had an aptitude for mechanical work, and we wanted to know whether we were measuring mechanical training, experience, or whether we were measuring a natural gift for mechanical work, so the next step was to try a group of boys on this same sample. We did that about eight years ago, and at that time graded them a, b, c, d, and followed them afterward to see what happened. We found that of 100 boys who eight years ago graded a, seventy have since become successful mechanics; of 100 boys who graded b, thirty have become successful mechanics; of 100 boys who graded c, ten have become successful mechanics, and a group of 100 boys who graded d, only two have become successful mechanics. So, today, if a boy takes the test and grades d, we cannot tell him he never will become a good mechanic; we tell him his chances of becoming a good mechanical worker are two in 100. We have tested something like 18,000 boys and followed them. We know out of every 100 boys about two become good mechanics if they grade d, some day; so, if a boy takes the test and grades d, we can tell him his chances of mechanical work are two in 100. They become just as good mechanics as the seventy a men, but of 100 d boys, only two will become good mechanics. So the chances of a d boy are two in

100; the chances of a c boy are ten in 100, the chances of a b boy are thirty in a hundred and the chances of an a boy are seventy in 100. We can never get to the place where we can tell a boy he should become a mechanic or he should not become an accountant, but we can map out more or less the field. We can tell him his chances in mechanical work are perhaps thirty in 100, and his chances in clerical work only two in 100, and in still a third field maybe his chances are seventy in 100. If he does not follow these it makes him think of the fields more carefully than otherwise.

So many boys get into a field with no real analysis of it before they go into it, simply because they have heard it was a good job, or their father was in it, or perhaps their father wasn't in it; without a real analysis of all the occupations before them; and testing a boy in this way, and telling him his relative chances in a dozen fields, makes him analyze those chances more carefully than he would do otherwise.

Having measured a thing approximately in one way, the first thought of the scientist is to find another way of measuring exactly that thing, simply to check the measure. The scientist never feels satisfied unless he can measure a thing in at least two ways, so we wanted another test which would measure this same ability to visualize structure. We decided to give a boy the six pieces of which an ordinary pair of dividers is made up. We simply give him the separate parts and ask him to put them together. It seems a more obvious mechanical test than a set of wriggly blocks, yet we found that for some strange reason, it doesn't work. It checks a little with the wriggly blocks—the man who does the blocks well has a little better chance of doing the dividers well, than a man who does them poorly, but there was not enough relationship to use the two tests to measure the same thing. When we analyzed it carefully, we found that boys who had had mechanical experience, who had mechanical knowledge, did the dividers well; men without mechanical experience, without mechanical knowledge, did them poorly. What we were measuring with the dividers was not the ability we wanted to measure, but simply mechanical training. If we took a group of apprentices we could separate quite accurately those who had had training from those who had not, but if we tested a large group of boys who started a course for mechanical work, we could not predict with the aid of the device, who would make a good mechanic and who would not, so we had to discard them.

Next we took this pyramid and cut it into eight more or less triangular shaped pieces, gave a man the eight pieces and asked him to put them back together again. Again we found we were measuring knowledge and not ability, because a man who had studied solid geometry could do the pyramid almost instantly. Men who had not had

solid geometry failed or took a long time, so we were not measuring this same ability, but simply again, knowledge, or training which any boy could get.

So we went to still a third test; we give a man this picture, take out thirty square blocks, and ask him to put them back in again where they belong. Apparently, the man with a feeling for structure, three-dimensional structure, does it better and more accurately than a man who has no feeling for structure, so that again we began to find a relationship between the wriggly blocks and the picture—not perfect, by any means, but the picture is beginning to measure in another way the same type of visualizing three dimensional structure which the blocks measure. It isn't quite as accurate, apparently, if you follow the success of men, but we are beginning to approach another way of measuring the same thing, and we will not be happy about the work until we can find three or four different ways of measuring accurately the same ability to see three-dimensional structure.

It is very easy to describe tests of this kind which are selected from four or five hundred tests which we have tried out which apparently work, and I think many people fail to realize how often tests simply do not work.

We wanted to measure memory. Memory ought to be the easiest thing in the world to measure. There is a standard test for memory, where you say three numbers to a man, 597, and ask him to repeat the three numbers; then you say four numbers and ask him to repeat them. And you say more and more numbers until he finally fails. Obviously the man with a good memory ought to be able to repeat after you a great many figures, and a man with a poor memory ought to fail after three or four trials.

There is a man in our pay office who goes through practically our entire organization of three thousand people and gives each man his pay at the end of the week, simply because there is a number on his envelop. My envelop has the number 35015, and this paymaster will come up and hand me 35015 with no hesitation at all. He cannot guess at it when he is handing out actual money; he has to be certain of the numbers; yet he will go through this organization without hesitation.

I thought very little about it until one day my number was changed, and he came to give me my pay. I could not remember my new number, he handed me my pay. I said, "How do you know my new number?"

He said, "I assigned it to you."

I said, "How many did you change?"

He said, "400."

I said, "How many do you know?" And I followed him around nearly an hour, and I saw him ask only one number of that new

bunch of 400, simply because he had assigned 400 new numbers he had the ability to remember those, and remember them certainly enough to hand out money on the strength of his memory.

I asked him to come in and try out our memory test. I said, "At present my numbers go only to fifteen." I thought I ought to make them go up to twenty-five before he came in. I read to him 5937, and he repeated that; I read 3896 and he repeated 3986—he couldn't repeat four numbers after me. I thought he was trying to put something over on me, because in this kind of work we have had all kinds of things put over on us, so I laughed it off, and that was the end of it. At the end of a week he came in again, more worried than I was about it. He said he knew I thought he was joking, but it was much more serious with him. He said he thought he had been tired that day and he would like to take the test again. We began, and again he couldn't repeat four numbers; one out of three he repeated correctly, but wasn't certain of it then, so he asked me if I would write it. I wrote the numbers down, then took them away. In that way he could repeat seven digits, but not eight. Then he tested me and I could repeat seven, but not eight, so we began experimenting in trying to find a way of measuring the difference between us. In two years experimenting we came to this test—we show a man a set of six digits, printed on a card, and take the card away; then six more digits on a card and take the card away; then six more—we show him eight sets of six digits, each in that way. When we are through we ask him to repeat as many of these six-figure numbers as he can. This man, instantly repeated seven without difficulty, and made a good guess at the eighth. I could remember the last one I had seen, provided you gave me credit for a little mistake I had made.

It shows how careful you must be in using tests. So many tests in the past had been made up because they were perfectly obvious tests, without being checked against men you knew were successful in that field. The greatest effort should be made to make these tests on men you know are successful in these fields.

The type of test with which you are probably most familiar is the so-called general intelligence test. If intelligence is really what the words say, if intelligence is really general, then we ought to find that we could give the generally intelligent man almost any of these problems and he would do them well—a set of blocks, and he will put them back together well because he has intelligence. We ought to find that the generally intelligent man can check numbers rapidly and accurately, because he has intelligence; we ought to find a group of men who do numbers and blocks well, that would be the intelligent group. We ought to find a group who do both poorly; that would be the unintelligent group. We find many men who do the blocks unusually well, who do the numbers very poorly; we find men

who do the numbers well, who do the blocks poorly. If we analyze several thousand in that way we find no relationship between block ability and number ability.

If, for instance, we should take a penny and a nickel and toss them into the air together a large number of times, we would find they would land a quarter of the time both heads up; they would land a quarter of the time both tails up, and half the time either heads or tails. So with these. If we test a large number of men we find a quarter do both well, a quarter do both poorly, and half do one well and the other poorly; here are two abilities that are apparently as disconnected as a nickel and a penny. These two abilities seem to be scattered wholly by the laws of chance among people, so that we must think of intelligence not as general, but as made up of at least two distinct parts, quite separate from one another, and in that same way we have been able to divide intelligence into five separate disconnected parts, and a man may have any four of those parts and lack the fifth completely, or he may lack four and have the fifth. Yet, when we turn to the executive, we find almost this thing that we think of as general intelligence. If we ask a group of sixteen unselected men to come in and try out four of these tests we find that one out of the sixteen does all four tests poorly, by the laws of chance. We find one out of the sixteen who does all four well—simply by the laws of chance. If, on the other hand, we ask sixteen executives to try out our four tests, instead of asking sixteen unselected men, we find that six or seven will do all four tests well, and not one will do all four tests poorly. That is, apparently the executive has this ability to do a large number of things well, and yet if we analyze that a little bit more carefully, we find that it is not what we think of as general ability, but apparently it is a group of abilities, a collection of abilities.

I remember one executive whom I tested in London. He looked over the tests and said, "Those are simple. Any one could do those. I wouldn't have any one in my organization who couldn't do all those things." He offered to come in the next day and try out the tests. I tried him on the number check. He did it very rapidly, and absolutely correctly. It was an unusually high score, and when I attempted to compliment him on it, he pushed it aside impatiently and said, in his abrupt way, "Proceed."

I tried him on a test for personality, and again he had a high score, and again he pushed aside my comment and said, "Proceed."

I tried him on a test for English vocabulary, and to my surprise he scored next to the highest of any one who had taken the test. I told him so and he was disappointed that it was next to the highest, but again he pushed the thing aside, and said, "Proceed."

So I tried him on the wiggly blocks. After ten minutes (his ste-

nographer was in the next room) I got up and carefully closed the door between the two rooms. You may remember that he scored unusually high in vocabulary.

. After something like twenty-four minutes he finally got the blocks back together again. It was inconceivable to him that there was something of that kind which he could not do; he insisted on doing over again, the same thing. He improved as much as the average man when he takes the test a second time. Afterwards, he wrote me a long letter. He took it much more to heart than most men do, and said that twice in his life he had had serious financial difficulties; once it nearly wrecked the company of which he was president, because he simply had insisted upon a mechanical contrivance. He knew he was a poor mechanic, but he never realized that he could have gone out in his unemployed line and brought in ninety out of 100 who would have done it better than he had done it; he was down at the bottom of any of those who had ever taken it. If he had had truly general intelligence it would have helped him a little in solving that kind of a proposition. He had not really general intelligence, but a large collection of separate abilities, a group of abilities, and yet one particular ability was lacking, and lacking almost wholly in that group. Almost every executive you try in that way you will find has a large collection of abilities and can do almost anything that you ask him to do, and yet if you try long enough you will find here and there an ability lacking to a surprising extent. Apparently then, the executive has not truly general intelligence, but a large collection of special abilities.

It is interesting to ask "Just what can the school do to help increase this collection of abilities, to help make an executive?" As nearly as we can tell, this ability to visualize in three dimensions, and the ability to check numbers, that is clerical ability, cannot be trained. It is as nearly as we can tell a part of the individual, almost an inherent characteristic. As nearly as we can tell, the school can do very little to increase the number of abilities which a youngster may have, yet the school, on the other hand, can do something, because four or five years ago I found four boys who did well almost every test that I gave them. They had exactly what the executive has, a very large number of separate abilities and yet today those four boys are no further along than they were four or five years ago when I found them, because they have been shifting from year to year, from one job to another. They know they have a great many abilities. One of them started on clerical work; after he was on that he began to realize that he wasn't using his mechanical side in any way, so he left clerical work and shifted to a mechanical job; he tried it for about a year and again realized that he was not using all his abilities, and shifted again. Each of these boys has been restlessly shifting from year to year.

A boy of course should shift; he should shift as often as he can,

to get new experience, providing he shifts with a plan in view, with a goal that he wants to reach, and not simply shift restlessly from year to year. The boy with a large number of abilities has the greatest possibilities. He ought in the long run to go much further than the boy with one ability, yet the boy with one ability is more apt to succeed, because he has that one ability and his future is ahead of him definitely. He can follow that one ability and become a specialist, and he is much more apt to be successful than the boy with many abilities who will shift.

It is our duty to find these boys with a great amount of ability and tell them that they have these abilities and that they are apt to shift, and that while they ought to in order to gain experience, they should do so with a definite aim in view. We ought to help these boys to map out a program so that they can shift to some purpose, and with an aim, rather than simply through sheer restlessness.

The second ability of the executive is apparently outstanding ability in his own particular field. Probably that is not really an executive ability, but a man must succeed in his own field ordinarily, before he can get an opportunity to become an executive. I remember one instance that I had in the Bell Telephone laboratory, in New York, where I tested the group of executives there, and one man after another came in and did the blocks in less than a minute; hardly one man in a hundred, or two or three hundred will do the blocks in less than a minute, yet this whole group of executives in a research organization came in and did the blocks in surprisingly fast time. They had outstanding ability in their own particular field.

In a group of accountants I found that same thing. I tested a group of boys in an accounting school in the number checking, and followed those who were selected by industry. Of those who were selected to go into an accounting department 55 per cent had scored A in number checking. I followed them for a year. Gradually those who had done poorly in number checking dropped out. At the end of the year, of the group that was left, 70 per cent had originally the year before scored A. Those who had not scored A were gradually dropping out. At the end of five years 75 per cent had originally five years before scored A in number checking. And at the end of eight years those who had gone through this process and become accounting executives had all, eight years before, scored A in number checking. That is, the executives were apparently selected from those boys who were outstandingly successful in accounting work.

This, of course, the school can do; it can analyze each man very carefully and pick out his strong characteristic, and help him little by little to get into the type of work which will call for that one outstanding characteristic which he has. That can be given to almost every boy; almost every boy that you test will do well in someone of

these tests, and can be helped to get on to the type of work for which he is naturally fitted.

The third executive characteristic is what we call an objective personality. When one starts to measure personality one is of course measuring a vague indefinite thing, and we floundered around a great deal before we found anything which would indicate personality. Now we say a word to a man—we say “table” and ask him to answer instantly the first word to come to his mind connected with table, or suggested. One man answered “dog.” I asked him why, and he said that every evening when he read as he sat by the table, his dog would lie down under the table beside him. He instantly thought of a personal association, something peculiar to himself. He is what we call the subjective type. His first thought is something connected with his objective life, some purely personal experience.

Amy Lowell, who was a poet who lived in Boston, when the word “table” was said to her, answered “cat,” because she had a beautiful white Angora cat—she instantly thought of her own dining room, her own cat. She was the extremely subjective type all through her life; she took violent likes and dislikes for no reason at all, simply because she liked or disliked a person.

Another man, when the word “table” was said to him, answered “antique,” and explained that the Sunday before he had been fixing an antique table. Out of a thousand, only one person said “dog,” one “cat,” one “antique.” Each of those persons was an individual, different from every one else and each instantly thought of something peculiar to himself, some personal experience. Each took what we call the subjective attitude. Out of that same thousand 267 answered “table,” “chair,”—the mere fact that 267 agree means that those will probably foresee the other man’s reactions. When I say “table,” “dog,” to a group of this kind, you see people look surprised. Why should a man answer “table,” “dog?” When I say “table,” “chair,” I see about a quarter of the audience nod, as if to say that that is what they would have said. The man who naturally says, “table—chair,” gets a certain amount of confidence; almost every time I say “table—dog,” and see this surprised look, I wonder, did I say what I meant to say. In a talk of this kind I wonder if I really said exactly what I intended to say, because of the look of surprise, so the man who naturally reacts “table—dog” sees the same look of surprise come over people’s faces, and the next time he is a little more hesitant before he answers; he becomes the retiring, the subjective type. The man who naturally reacts “table—chair” sees the people nod in approval; he pushes ahead and becomes the aggressive, the objective type.

So you find the executive tends to be of the objective type; the type who will react “table—chair” apparently it isn’t because he is the common type. My first thought was that these ought to measure

originality, and so I went to my own boss, who I know is an original man, to sponsor such work as this, and asked him if he would take my test, and I began giving him the list. He answered the most commonplace right through the list. At that time my chart was the unusual answer at the top and the commonplace at the bottom. When I found that he gave commonplace answers all through, I had to tip my chart, (simply to hold my job). And you find that the test is not measuring originality, but apparently it measures ability to stand away from things as an outsider, to take an objective viewpoint. If you can get a large number of men to take an objective view point they will all come to the same conclusion. It is only when we let our own personal experiences enter that we begin to disagree with other people. So the executive apparently has the ability to take the objective attitude, to see it as an outsider sees it.

We have, at the General Electric, what we call the plan of representation. That is, any worker who feels that his foreman or his superior is unjust to him, can complain to the plan of representation and have his case tried out and decided either for the worker or against the worker." We find in our subjective foremen who are of the "table—dog" or table—cat" type, that there are twice as many complaints made against their decisions as against the decisions of our objective foremen. When these cases have actually been tried out by a shop committee of six men, we find that our subjective foremen have 80 per cent of their decisions reversed, whereas the objective foremen have 70 per cent of their decisions confirmed. Apparently the objective man can see the other man's point of view a little more fairly, a little more accurately than the subjective man. The subjective man is apt to let his personal prejudices, likes and dislikes enter into his decisions so that he cannot quite see the other man's point of view. This apparently does not affect anything except personnel problems. It doesn't affect a scientific problem; the whole group of outstanding scientists are of the subjective type. The subjective man is apparently the individual worker, such as a research man, a designing engineer. The objective type is the group worker, the executive the salesman. The test separates the individual worker from the group worker, such as the executive or the salesman, so that if you test a large industrial group you will find that they test much more objective than a non-selected group, because they are group workers, apparently.

The fourth executive characteristic is perhaps the most interesting, because most surprising. When I started testing executives two years ago, I found that they were interested in a test for English vocabulary, simply the meanings of English words. I wasn't interested myself, because I didn't do very well in the test when I took it, but because executives were interested in it I gave it, and to my surprise, executives again did well, but not unusually well. I remember the

vice-president of one very large company who came in take the test. He went through every other test with no difficulty until he came to this test for English vocabulary, and he said he wouldn't take it; he said that he had left school when he was fifteen and had worked his way up through the organization and he knew he couldn't do anything in English vocabulary; he did very little reading and wasn't going to show up his ignorance; he knew he couldn't do it. So I said the only thing for me to do was to give him the zero on it. When he heard that he finally consented to take it, and to my surprise he made only two errors in the test, whereas the average college graduate makes twenty-one errors. I began to get interested in the test from then on—150 rather difficult words, the average graduate, picking out two or three of the colleges that specialize on English makes twenty-one errors out of the list of 150; the average college professor makes seven errors in the list of 150, so you see it is a difficult list of words; yet the average major executive picking out the group of major executives makes only four errors. Why major executives do the thing so well I have no idea; of course it is true that an executive must give orders, he must put his ideas over to other men, possibly he needs a knowledge of words in order to do that, yet these are unusual words, difficult words, words an executive never needs, and certainly never uses, either in writing a letter or a report, so that apparently it isn't wholly putting his ideas over to other men that gives him this large English vocabulary. Possibly it is simply that it comes as a by-product of schooling.

The telephone company has recently made a very careful analysis of 3,800 college graduates working with them; they find that after a college graduate has been out in industry two years you can hardly tell the difference between the man who did well in college and the man who did poorly. At the end of five years the man who was in the upper tenth of his class begins to stand out definitely above those who did poorly. At the end of ten years there is a marked difference, so that the upper tenth of those who were in college have a salary which is very nearly three times as great as the salary of the lowest tenth. There is quite a marked difference between those men who do well in college and those who do poorly in college. That surprised me quite definitely, because I have always thought of those at the top of a college class as more or less grinds. We want men to do fairly well in college, but I never thought of selecting those at the top of the class; yet if you follow those men you find that as a group they tend to be more successful in industry than those at the bottom. Not in every single case—you can always pick out men at the top of the class who have not been successful, but by and large, the upper tenth of the class has a much better chance in industry than the lower tenth of the class. Possibly, vocabulary comes as more or less of a by-product of school, yet that hardly explains the thing. The vocabulary checks

better with executive success and executive salary than any other single test that we have been able to find. Perhaps it is simply because executive problems are thought out in terms of words. If you attempt to do a thing like the wiggly blocks, you don't talk to yourself, you visualize the problem. If, on the other hand, you attempt to solve an executive problem, you instantly find yourself talking to yourself—not talking out loud, necessarily, but formulating the problem clearly in terms of words, so that the man who has a large fund of words can probably name to himself instantly the exact thought that he wants to think. The man with a small vocabulary must flounder around in his own mind before he can get the word he wants to express the thought that he wants to think, so that the man with a large vocabulary can think out an executive problem a little more clearly, a little more quickly than a man with a small vocabulary, and this is perhaps the only explanation we have, that executives as a group do have a surprisingly large English vocabulary. English vocabulary is something that can definitely be taught, so that if we draw the learning curve, the growing curve, for a thing like the blocks, we find that boys of fourteen, as a group, do as well as men of forty. After a boy is fourteen or fifteen years of age he learns nothing that will help him in doing the blocks, simply because the best boy at fourteen is as good as the best man at forty; the poorest boy at fourteen is as poor as the poorest man at forty. When you come to a thing like vocabulary you find that the man of forty is very much better than the boy of fourteen; that is, vocabulary is a thing which can be quite definitely taught, and improves rapidly until a man is thirty, thirty-five, or thirty-eight years of age, and improves even a little after that, but not as rapidly. Even though it is discouraging to think that a thing like the wiggly blocks apparently cannot be taught, a thing like vocabulary which tests better with executive success than anything else we have, is quite definitely teachable. Recognizing that an executive characteristic is a wide knowledge of words, I feel that we ought to pay a little more attention to helping a boy acquire at least this one executive characteristic.

One hears so much about tests that almost every mail brings me letters asking if I won't send a man a complete set of apparatus in order that he may start giving tests. It always reminds me a little of writing a chemist and saying, "Won't you please send me a complete set of the bottles you use." It is true that apparatus of this kind must be standardized very accurately and very carefully, and yet, after all, it is little more than a chemist's bottle toward getting a chemist's results. A man, in order to give tests well should have given three or four hundred different tests; a man cannot learn in a week or even in a month, to give tests. Any one can learn to give tests, there is no trick to it, there is no secret to it, but it does take

practice, and a man ought not to attempt to give tests of this kind unless he is willing to spend his full time giving tests, and unless he is willing to put in three or six months of intensive training learning to give them. After all almost any one can dabble in chemistry, yet if you have ever attempted to do so you will find out how hard it is to get chemical results. Yet any one has a right to, for after all if he makes a mistake he can throw it away. But a man who tests a youngster and makes a mistake is apt to do that youngster lasting harm, is apt to influence him a little too strongly, to put too much influence in a test; he cannot throw the youngster away and begin again. I feel that men shouldn't give tests in any kind of an organization unless they have a fulltime trained man doing nothing but giving tests.



“Art and the Man”

VESPER GEORGE

Director of the Vesper George School of Art, Boston

I AM to talk about “Art and the Man.” I suppose that means what the study of art does to a man in his development. I think there are very few things that it does not do to the man, but I am going to call your attention to some of them that have occurred to me in a life long study of art.

In the first place we cultivate a sensitiveness to beauty. We learn to like things because they possess lines, proportion, color, or some aesthetic quality that appeals especially to us. Beauty is a very elusive thing. I suppose that in the final analysis beauty is a matter of taste, and taste is a personal thing. I think we are all inclined to say that this thing is beautiful because we like it, because after all isn't it true that we may or may not like a thing whether it is beautiful or not? It all depends on our point of view.

The cultivation of the imagination. I presume that there is nothing that the world needs just at this present moment so much as imagination. Imagination will give a man a sense of proportion, a sense of scale and it ought to help him to cultivate a sense of humor. If a young woman should ask me what qualities a young man should have in order for her to live happily with him I should answer, by all means pick a man with a sense of humor. If all our politicians and legislators had a better sense of humor I think we would live in a much happier world. They take themselves too seriously. In the final analysis, if we laugh we can do a great deal of good. The instant that we have a sense of proportion, the instant we have reached a place where we can laugh, we are able to understand and appreciate the other fel-

low's point of view, and when we can appreciate the other fellow's point of view we certainly are not likely to go to war, because war is the result of the lack of understanding of the other fellow's point of view.

Our education is especially remiss in the question of imagination, I think, due partly to the fact that the average parent has forgotten he was ever young, and secondly, all our processes are of a character to relieve the student of the necessity of cultivating imagination. For instance, the movies. The movies do everything for us. We don't have to conjure up something from our imagination because it is all right there. I remember—looking back to the story of Jean Valjean, when he gave a very beautiful doll to a child. You remember? The child was playing with a rag wrapped around a stick and she was perfectly satisfied with it, and then he bought her a magnificent doll, and my feeling is that he did her an injustice.

When I was a small boy—my people not being rich—I was forced to make my own toys and I wouldn't give up what this did to my imagination for all the toys in the world. I remember, speaking of imagination, a little instance that happened in my own life. My daughter, who was then about five, came running to the kitchen door one day, shouting "Daddy, Daddy, a bear is chasing me." I ran to the window and looked out on the porch and I, too, saw the bear, and we had a lovely time with that imaginary bear.

Art to me is emotion. I think there are too many mathematical minds delving in this art field. They study it in solid strips, cut art up and get it in so many squares. It can't be done and never will be done. I painted a picture one day of Pegasus with his wings and one of the studio scientists said to me, "How do you know his wings grew in the place you have them?" And I answered that the only horse I had ever seen with wings had them in that exact place and so I had painted them there, too. Well, he couldn't say anything to that.

Do you remember what Copernicus did when they told him that they would roast him if he didn't recant? He said, "All right, it isn't so." When he was going away he said, "The truth needs no martyrs." And the truth does *not* need any martyrs.

We are delving in imagination, in the joy of creating things. We are having a lovely time and Pegasus is still feeding on ambrosia in that paradise and drinking from the Pierian spring, and he will continue to do so.

If you are going to teach art you have to bear in mind that it is largely a question of imagination and an entirely emotional affair. You have got to learn to say the thing that you have in your mind just as exactly as the literary man has to learn to say what he has in his mind. He uses the English language and we must use paint or pen to tell our story in the same way. You can take an intelligent man and teach him

the English language until he knows it upside down, but if he doesn't have any poetry in his soul he will never write it for you. The same with our art. We learn in the art school how to use the different methods of expression, but what we express is ourselves and it comes from our imaginations, from the inside. It is a purely emotional thing.

If we have studied art long enough to get an appreciation of it, and that is the only thing, it is as if we possessed the thing itself. I wonder if you remember the story of Van Dyck and the mountain. Van Dyck was out walking with his boy one day. The boy said, "Papa, who owns that mountain?"

"I own that mountain," said Van Dyck.

"Why, I didn't know you owned it," said the boy.

"Well, I don't pay the taxes and I haven't the deed, but I go out and look at it every day, and the man that does pay the taxes lives out in Ohio and never saw this mountain. I go up the mountain in the morning and see the sunrise and I go up in the evening and see the sunset. If the mountain isn't mine, whose is it?"

That is true of everything, mountains included. If we have an appreciation for a thing and can get a reaction from looking at that thing, the thing is ours, and if the man that owns it gets no reaction from it, he might just as well be dead. I know of people who have silver plate stored away in a vault. Why, if somebody came and stole it and carried it off and kept it for ten years, they wouldn't be any the wiser, and that isn't the possession of a thing. If I have anything that is beautiful I place it where I can see it. I would never get any joy out of the memory that it might possibly be in a vault if somebody hasn't taken it away.

I think there is a tendency on the part of a good many educators of art, people that ought not to be in the business, by the way, to develop the goose step. That is to say they make a plan and apply it to the whole arrangement by which art can be taught, so that everybody will do this thing the same way. If there is anything in the world that can't be taught like that it is art. Everybody approaches it from an entirely different standpoint.

Just before I stepped upon the platform I was talking to Mr. Ege and he was telling me of a young man that he knew who wanted to study art. This man wasn't very good in algebra. Neither was I. I remember I was promoted from the assistant's room to the head master's room in the school where I went. By the way, I was always two-thirds down in the class. She said to me as she met me, on the stairs, "You have gone up there, I hope you will be able to stay up. The things they were teaching in the school were not the things that appealed to me and I graduated two-thirds down in my class. I wish to draw your attention to this fact,—that the ten brilliant scholars that graduated with all the honors haven't amounted to anything. Later

I painted a decoration forty feet long and ten feet high with something like sixty figures, which by the way, is in a high school in Greenfield, Ohio. It was an exhibition in the Art Club in Boston and I had the pleasure of standing side by side with my former teacher who had said, "I hope you will be able to stay up there." She gave me my meed of praise and justified my devotion to art.

I spoke of the movies and of the lack of imagination that comes from going to a place like that. I wonder if any of you have seen "The Yellow Jacket." Our theatres are going through a great revolution and they are leaving out the literal and are catering much more to the imagination. They are giving things by suggestion, which is very much better. I always feel insulted when I am shown something in the movies and then a sign is put up to tell me what happened. It is such a compliment to my intelligence! In "The Yellow Jacket" the whole thing was done by means of symbols and if you don't have any imagination, of course, it is lost on you. There was a little girl sitting beside me, a stranger to me. I heard her say to the girl who was with her, "What is it all about?" The poor child was lost. In this play a woman holds in her arms her baby and the play necessitates her leaving that baby. She is to die and so she talks to the baby and lays it on the table and disappears. And the baby she held in her hands was only a stick with a piece of cloth wrapped around it, and still she made the people weep. That is what I call imagination.

You see it was good psychology, too. Women are prejudiced in favor of babies one way or the other. If the baby had yellow hair, many wouldn't like the baby because it didn't have black hair, and if it had black hair, some would want it to have yellow hair. In this particular case you see you can think of it any way you wish.

There was another thing happened in this little play which I wish to mention. There was a pair of lovers who were trying to escape, and in order to do it, it was necessary for them to take a boat. The property man (who by the way was always on the stage, coming and going, and handing the people the things they needed) placed two chairs side by side. He took a piece of drapery and hung it over them. The lovers came in and climbed upon the chairs. Two men came in with sticks, stood behind the two people and moved the sticks back and forth like oars. Somebody in back scraped two pieces of sandpaper and you knew right away that it was a boat and it would have been entirely superfluous to have had a mast and sail and flag and furthermore, that would have distracted your attention from the vital thought, which was that the people were escaping.

A social worker told me a very interesting story apropos to this and one of the best examples of imagination I ever heard of. She was in the habit of visiting a Jewish woman who was very poor, but had never met the woman's husband. One afternoon she called and the

woman said, "I am so glad you came in this afternoon. My husband is here and I want you to meet him. He is taking his nap now." And she went into the other room—they only had two—and the man came out of the bedroom, without any collar, vest or coat, and entirely ignored the guest. He walked over to the sink, which was in front of her, and washed his hands and face. After the bath was taken, he retired to his bedroom, put on his missing garments, came out and was duly presented to the lady. That was what I call imagination. He didn't exist until he was ready and then he was there.

We are inclined to be misled sometimes by superficial things. We run away on some new fangled idea. We get something from this person and that. Here is a new way of doing this and here is another new way. There are fundamentals underneath which we are dealing with. We are teaching principles, cultivating appreciation. And as soon as the student gets that appreciation he will go without our help. In my own school I can tell instantly when a student gets to that point. I can pick him out and say, "This student has arrived." If he left my school tomorrow he would go on and on. Nothing would stop him.

A great many people go out on the hillside at sunset and say "Isn't it beautiful?" And it isn't always beautiful at all. It is merely startling. There is a great deal of difference between something startling and something beautiful. They are noisily visible. You know what Whistler said—"When there is a beautiful sunset, paint the East." The next time you see a beautiful sunset look at the East and see what you get. You will see something that is subtle and beautiful and harmonious. It is the difference between a poem and something that is written by the cub reporter on the newspaper.

A small boy had been taken by his Sunday school teacher out into the open country. He had never been out of the city before and he was overcome by everything he saw, and toward the end of the day, when the sun was setting, she drew his attention to the lovely sunset, lovely in color, and there were lovely fleecy clouds around it, and she said, "Isn't it wonderful?"

The boy replied, "Yes, it looks like a fried egg." The only thing he had seen that had white around the edge and yellow in the center was a fried egg. It is all a question of point of view and sensibility.

I am going to tell you this little story because it illustrates the care with which it is necessary for an artist to work. I think the best way to give instruction is by amusing people. If their minds are in a free and plastic state you can get your lesson across to them much better. I frequently meet former students of mine on the street in one city or another and not infrequently they say, "Oh, Mr. George, you don't know how I miss your stories." I tell them if for nothing more than to get them to remember me.

I was painting one of my decorations. It was twenty-five feet long and twelve feet high—I made all my studies for it very carefully before I was ready to put the paint on. I had taken the studies and worked them in charcoal on the large canvas. There were something like fifteen or twenty figures carefully drawn with charcoal, and it represented several weeks' careful labor. One morning I came in and looked at it and I decided the middle figure was not in scale with the rest of the design and in order to put him in the right proportion to the rest of the painting it was necessary to rub that work away. I had a young man working with me by the name of Jack Connah. I said, "Jack, go down to the bake shop and buy me a loaf of bread."

"What are you going to do with it?"

"We are going to take this drawing off." He opened his eyes and also his mouth, but nothing came out. He was astonished that after three weeks' work on a canvas I should eliminate it. That was something he couldn't understand. That is exactly what an artist will do and that is the difference between the artist and the artisan. If I had let that thing go I should have remembered it all my life and every time anyone had spoken to me about it I would wonder if he had noticed that the central figure was out of proportion. The composition required a tall and dignified figure, and that is why it was changed. When you are in earnest, work is so important to you that nothing else counts.

That reminds me of a play I saw—"The Royal Family." It is a good play by the way. Go and see it. And in it was a manager, a theatre manager, and he was an artist. He was an artist because he loved his job and he was so anxious to make a successful play that from his point of view it was as if he said, "I have a play and I am going to see how much money I can lose doing it." That is the attitude of the artist, not what is there in it for him.

And then there is color. There are a great many people that know nothing about color. There are a great many artists that know nothing about color. And incidentally, a great many painters are not artists. I want you to know that a man who paints on a canvas a beautiful still life, or a portrait of somebody, and doesn't know any more about art than what is contained on that canvas, is only a painter. An artist is a man who sees art in whatever he looks at. He dresses differently. He buys a different kind of a house. His interior decorations are different. He sees beauty in furniture, textiles, lamps, everything that has a possibility of proportion or line or color, and then there are artists who appreciate much of that and although not color-blind, might just as well be. You know there are people who are stone deaf and there are people who hear altogether too much, and between those two there is every possible difference. Well, the same thing is true in regard to color. There are people who don't see color, to whom the

whole world is like a movie. Now, if you go to a movie, you can see all the emotions there, and yet there is no color. Now, color is desirable, but not necessary. But it is very desirable, and to those people who have a sensibility to color, the world is a different place. The whole world may be a black and white world to some, and they may be entirely unconscious of the fact that there are lovely colors in existence. If you feel color, you will put it in your work, and if you don't feel it, you won't put it in. The one is sure to follow the other.

I believe, however, that you can cultivate a sense of color. In my school we make a business of doing that and it is one of the most fascinating things to me to see students change from dull to brilliant colors in their work.

I was visiting the home of one of my former students, a very charming lady, a lady who thinks a great deal of my opinion. I have to say that to bring out the point that follows. She had invited me to lunch and she showed me some pastels that she had been making. While I was there, she said, "I want you to tell me what you think of my apartment."

I looked at her and said, "Do you really want me to tell you what I think?" I took her around the apartment and I said, "What is the color of that?"

"Brown."

And this?"

"Dull red."

"And the color of that?"

"Dull yellow."

"Well, you haven't a bit of color in your apartment." Why, it came as a revelation to that woman. She is past twenty-six, too. She didn't know that she didn't have any color.

I will guarantee you that that apartment won't look the same in a little while. It will blossom out in color.

All this is true. It is partly due to the fact that we haven't any color sense and partly due to the fact that we haven't any courage. We are afraid. Of course, it is a difficult thing to use bright colors.

I have already run over my time, but I want to say a word about taste. I think that taste is the sixth sense. I don't think anybody has said that before, but I think that is what it is. It is the sum of all the other senses. I don't know much about chemistry, but I read that if you take certain chemicals and put them together, the coming together of these ingredients will produce something entirely foreign to any one of them. Well, that is what taste is. Taste is the sum of all the other things put together and entirely different from all the others. And if we have taste we will use it in a thousand ways.

I have a little poem here by Helen Hunt Jackson. I think this is an excellent illustration of what constitutes taste.

“MEASURES”

BY HELEN HUNT JACKSON

I have a dainty cup of glass,
It is not graven by a line,
Its beauty is its fragilness,
A baby's hand might crush it fine.

I gave a man to drink from it one day,
A draught of water cold,
He took it like a woman's hand
In loving, lingering, longing hold.

He held it up in keen delight,
Gazed on its surface, rare and fine;
“Such glass as this,” he rapturous said.
“Gives water all the grace of wine!”

Another day, another man
Sat eating, drinking at my board,
Into the cup of peerless glass
A peerless wine for him I poured.

He drank it at a swallow down—
With smothered wrath I well-nigh burst,
Nor wine nor glass was aught to him,
So that he quenched his boorish thirst.

“Ah me!” I said, “To him that hath,
All things on earth their tribute bring.
From him that hath not, earth takes back,
And leaves him beggared, though a king.”

“Art and Printing”

CHARLES FABENS KELLEY

Assistant Director of the Art Institute, Chicago, Illinois

I SEE that this program is divided between art and printing. Mr. George has handled the art side splendidly, and the gentleman who follows me will take care of the printing, so there is nothing for me to do but act as a happy medium, if possible.

I owe a tremendous lot to Mr. George. Probably, if it hadn't been for him, I wouldn't be in the fine arts today. Whenever I think of the great patience and devotion that he showed to me and the other men that were working with him twenty or twenty-five years ago, it is helping me to have a little more patience with exasperating youth attracted by the popularity of the Art Institute School.

I want to tell you two or three stories about Mr. George. He told you about his toy making when he was a youngster. Well, that play spirit still persists. About twenty or twenty-one years ago I was working as his assistant, painting some mural decorations. One day he told me he had come in the night before and he was very tired, and only had time for two hours' nap before he went out to dinner. I asked him how he was able to wake up and make the dinner. "Did you have an alarm clock?"

"No, I didn't have an alarm clock. I made an alarm clock."

He took a candle, marked several notches equi-distant up high on it and saw how long it would take each notch to burn. Then he marked off, in terms of the notches, a two-hour period and sawed the candle half through. He attached a string to a nail in the wall, passed it through the slot in the candle, and to the end of the string he suspended a tin pan which hung above the floor. Two hours later, he awoke and made his dinner engagement.

This sympathetic approach is something that Mr. George has always had, and in order to contrast that, I will tell you another story which illustrates the point still better. It is another story about a boy and a bear. A small boy had a very keen imagination, just as Mr. George's small girl, but instead of the parents rejoicing, it distressed them very much. The father thought the boy an unmitigated little liar, in danger of eternal torment, and when one day the lad came running in and said that a bear had chased him, his father said, "Now, see here, this won't do. You know very well there is no such thing."

"There is, daddy. You look out of the window and you will see it," and there, to be sure, was a big dog.

"Well," the father said, "you ought to have known that dog was

not a bear. There aren't any bears around this part of the country. Kneel down and tell God about this and tell me what He thinks."

A few minutes later the boy came back and said, "Well, God told me the first time he saw it he thought it was a bear, too."

We have been trying to experiment in printing arts in the Art Institute School for a number of years, as I think those of you who are deeply interested in the printing arts already realize, because your Mr. Detterer has very frequently acted as chairman of your round table group. We have come to the conclusion that a printer who knows nothing about art is just as useless as a designer who knows nothing about printing, and unfortunately, both types are teaching printing art at the present time.

The moot point of any educational discussion in art always is how to get across the idea of discrimination in terms of whatever activity we may be talking about, and a student who can design a fairly decent looking alphabet, who can set up a page of type, who knows how to run a press, who can even illustrate a booklet with a two- or three-color woodcut which has been executed by him and yet cannot tell which is the better of the two examples of printing that are shown him, is not educated in the art of printing. There is no such thing as two objects being of absolutely equal merit. Of course, there may be a thing that is good for this purpose, and a thing good for that purpose, and that is the thing in which he should discriminate.

Now the text of my speech, which I am to give, and in fact, any talk I may give, is always the same, no matter what I call it. You remember the peerless orator, William Jennings Bryan. He had four lectures, all good ones, and they could be given any numbers of titles. He could use them for one hundred and twenty-five subjects. I have only one, and no matter what it is called, it is always the same. I believe that any teaching of art that is not purposeful is absolutely useless, and that poor art instruction is worse than no art instruction because it defiles a noble activity. I feel that the great difficulty with all our people in the United States today is their great timidity in the face of what they call art. What is art? Most people would define art as "hand painting," and if the subject is nude, it is high art. When you show a person a picture he either hastens to say something and get it over with, or he says something that is not very intelligent, as a rule. He will sometimes say, "I don't know anything about pictures," and yet he is well dressed, has a good motor car, and so on.

I am not going to dwell upon it, but the fact is that the American public—due largely to the training it received in our schools—has not the courage of its convictions in the matter of taste, which is largely the fault of the teachers who are not teaching art. I think the thing we need most in all our schools at the present time is to see that the teachers who are not teaching art do not manifest such an abysmal

ignorance of art subjects as they do, because one faithful, intelligent, educated art teacher can have his or her work entirely ruined in the next fifteen or twenty minutes by some person with a good deal of personal magnetism, but no knowledge of art, and the children will be swept off their feet.

The person who does most damage in art, and I am thinking of art now as printing or making stencils or posters, or any graphic activity for a definite aesthetic purpose, is the English instructor, and it is not his or her fault. They have got to teach English. The children have got to take it and they sometimes forget the wonder of the subject they are teaching and take a picture and tell the students to analyze it. They are asking the students to do something they are perfectly incompetent of doing themselves, and no instructor has a right to expect a student to do something which he cannot do.

How many English instructors do you know that could talk to you intelligently about a picture for five minutes? Not the majority of them, and that, I say, is absolutely inexcusable.

Some day I want to suggest as a forward step in art education a seminar in high schools, to be followed by a seminar in all grade schools for all the teachers in those schools, to be conducted by the art instructor in those schools on the things which any intelligent person must know about art in order not to be considered extremely ignorant. If the art instructor meets with the rest of the faculty one afternoon a week for three or four weeks he will do a tremendous amount of good, and, in my opinion, they will ask him or her to continue the talks and develop discussions.

Last week I talked to a splendid body of boys in a Lutheran College not far out of Chicago, I knew I was going to enjoy talking to them because several of them were training for the clergy and they sang a hymn before the talk began so beautifully that I knew they had fresh and expressive emotions; I knew that lads who had the ability to sing that way were worth talking to. I believe they enjoyed it and got the point, but the first thing one of the professors asked me afterwards was whether we valued the Rembrandt in the Art Institute at a million dollars or not. And I did everything I could, to quote from one of the recent "Scandals," "to insult him in a perfectly nice way," because I felt that he had gotten absolutely nothing out of what I had been trying to impress upon them.

Art is the simplest thing in the world. If you hear me talk again this afternoon you will hear this same thing, though I shall try to say it in different words. There are only two things to it, first, you must have something to say, and second, you must know how to say it. The supreme difficulty with ninety per cent of the self-styled artists who are practicing and with the unsuccessful art teachers who are practicing, is that they are trying to say something when

they haven't the slightest idea what they want to say. Now, how can you do that? It is absolutely impossible. They are beaten before they start out. There must be a purpose for everything they do and that purpose must be emphasized every step of the way.

To come back to printing arts for a moment, let's remember some of the ornamental letters that we had in MacGuffey's Readers, those early reading books. They may not have been MacGuffey's in the worst instances. Their ornamental types were just about as far distant from the type which Goudy designs today as possible, because they felt it was necessary to do something useless and extravagant to a piece of type before it could be artistic. I heard Goudy say the other day that the designing of type is the easiest thing in the world—all you do is think of a letter and draw a line around it and there it is. And he doesn't draw any useless lines.

The American public today in its selection of costumes, motor cars, new styles of electric refrigerators, and so on, is very sensitive, keen and discriminating in its selection, and it will not select anything that has all sorts of useless appendages. Nothing looks more ridiculous to us now than to see the costumes our grandmothers wore. They felt that in certain characteristics of the human figure their Maker had only indicated the direction, but not the extent to which the development should go. Now-a-days we feel that our Maker knew his business pretty well and we are not interfering with it in any way, and I believe that that is the principle that should underlie all design—don't do a single useless thing.

That comes down to economics, something else I am going to say this afternoon. I think that if we use the dollar as our criterion in art, we won't go very far wrong. That sounds like heresy, doesn't it? The American people are always talking dollars. The Americans have to earn their dollars and then they have to spend them, and we are seeing everywhere around us Americans who know how to make money very easily and haven't the slightest idea of how to spend it. They are laying it out for something useless. Now art is never useless. It is never extra. It is never superfluous. Art itself is not something that is applied to a thing after it is done. Art in printing is not a page of type with a hole placed in it and a fancy capital in the hole. It isn't a title page running in newspaper Gothic and then some sort of extra lead designs popped into the vacant spaces that may result; and yet there is altogether too much of that being done today in our print shops. I do not now refer to printing instruction in the schools because I don't know anything about it and I had better keep out of that.

In our Printing Arts Department we have worked for a very definite purpose, and have attained such results that nearly half of the Graphic Arts Show last year in Chicago was composed of ex-

amples done by the students of the Art Institute School. And another thing that will show you, I believe, that we are working along sensible lines is that Donnelly and Sons, one of the greatest printers in the country, who get out everything from telephone directories to the new Encyclopedia, Britannica has made an arrangement with us whereby they take our two best printing art students in the fourth year into their plant on half time, and what is more, pay them. Thus our men who are trained theoretically, and to a certain extent practically, go into a plant where they are doing work for very definite commercial purposes and Donnelly is very pleased with them.

What do we do in return? We give them two scholarships in our school for the two best apprentices whom they are training and so everybody is very happy. You will be interested to know that at first Donnelly thought it was impossible to take women into the plant because they didn't have any. Of course, there were women stenographers and secretaries but no women in the technical side of it. But they are so satisfied with what we are trying to do that they told us a few months ago they would take the women, too. I don't think that is broad-minded. I think that is just good business and that is why they do it.

I have given you my speech, whatever subject I may be talking on, and I hope some of it may be helpful.



“Correlation of Art and Printing in the Grades”

DAVID R. WINEGARDEN

Printing Instructor, Indianapolis Public Schools

MR. DAVID R. WINEGARDEN: This is rather a hard program to talk on after listening to two men who have painted canvases for rooms, especially when the speaker has a hard time painting a barn, but nevertheless it is very short and I think that it will be of help to a few.

I am to speak on the “Correlation of Art and Printing in the Grades,” and I think I shall read my paper.

The Correlation of Art and Printing

The Art gained from direct contact with printing is considerable. Perhaps no subject asks more of art than does printing; for into every printing problem comes an art problem. The choice of type and its arrangement, shape of type mass, margins, spacing,

decoration of pages and covers, color harmony and size of paper all are art problems as well as printing problems. The fact that several hundred copies are to be made of which each will stand as a reminder of the amount of effort a pupil puts into his work will prove a strong incentive for him to do his best both from an art standpoint as well as a printing standpoint.

Our school is not a vocational school. Very few pupils plan to take printing as their life work, so our aims are more toward art and printing appreciation and the development of the individual through his creative efforts. Appreciation lasts a lifetime while the regular printing exercises are soon forgotten. One might term it as a cultural subject instead of a manual subject.

Color harmony in ink and paper provide opportunity for developing good taste. Selection of paper is still another. Printing may be done on the cheapest manila paper but if the color and arrangement is pleasing and artistic it will fulfil its function. A paper of fine texture or delicate tint would indeed be out of place if used for an admission ticket or to serve a temporary need.

A printing class linked with a design class generates in a boy the interest needed to tide him over the uninteresting first term of the work that deals with the learning of the case and print shop rules. Beginning groups study and make layouts of simple admission tickets and business cards. These layouts are discussed by the group and the most attractive are set up and proofed. The principles of art are taught in the art department by the art teacher. These same principles are carried out in reality when the pupil applies them in his print shop work.

A great deal of our printing work is carried out in the art department before it is carried out in the print shop, such as layout for announcements and all printed cards. The girls take it up just the same as the boys because they are interested in it and they will run across printing all the rest of their lives and they want to appreciate it just the same as the boys.

The finest school project that we have ever tried is the school paper, the name of which is the *Bell News*. The making of it involves the correlation of several school subjects, the most important of which are art, English, spelling and mathematics. The student derives a great deal of pleasure and satisfaction in its making even if he is poor in his academic subjects. The paper serves as the best and about the only way of acquainting the parents with the activities of the school. It advertises the school.

When deciding on the kind of a school paper, two points must be considered; first, the ability of the pupil and second, the time allowed for the work. In our school the seventh and eighth grade boys devote ninety minutes per week to printing. In grade schools

we find that an eight-page paper with colored cover, fastened with staples is all that should be attempted. The paper is issued monthly entirely by the pupils. Some school papers are issued by seasons, Fall, Winter and Spring, others quarterly, but we find that often the so-called "News" is out of date or dead by the time the paper is issued.

There are a great many schools at this time that are starting school paper work and I am going through each step of the organization here so that if you are contemplating having a school paper I may possibly say a few things that will be of help to you.

In organizing the paper staff we have selected a reporter from each room and one for each school activity such as baseball, sewing, domestic art, etc. These reporters write an article each month. These articles are handed to the English department where regular English classes judge them as to their literary value. The best reports are copied in duplicate and sent to the print shop where one copy is filed and the other used by the type setter. When all the copy is set, triplicate proofs are taken of each article. Two proofs are sent to the English department, one of which is proof read and returned and the other used to make the dummy or the suggestive layout. The third proof is sent to the art department where block cuts are often made to illustrate the stories. When the dummy is sent to the print shop the paper is locked up in page form and final proofs are taken and corrected.

We now have reached the point where individuality may reveal itself in color and form. We want our paper to be a work of art reflecting the skill of the design printers who produce it. The cover should be so pleasing that one is anxious to read the contents. Four blank linoleum block cuts are made and sent to the art department where the art classes design and cut the cover. These are proofed and the best is printed on the cover. Sometimes the covers are hand tinted by the art classes.

By that I mean that the linoleum block is designed and cut in the art department, sent to the print shop and printed in silhouette and the colors are filled in by the pupils in the art classes by factory production methods. They decide on their own colors and make it a very harmonious cover.

The paper is then assembled and the business manager announces its sale to the school. An exchange editor sends out copies to different schools who in return send their school papers, which are studied by the printing classes for new ideas and suggestions.

The process of linoleum block printing is rapidly becoming a very popular activity in the schools as well as among the artists and commercial printers. The key note of this convention is the development of the individual through his creative efforts, so if you

are looking for an effective medium for expression of the creative impulse have your classes carve some linoleum blocks.

These block cuts may be used for many purposes. Some are used to print graphs and charts, Christmas cards, Easter cards and motive printing such as Christmas wrapping paper.

A careful program should be made out by the printing and department teachers before each term's work.

I have had my classes make up some samples. I have them here and if there are any art teachers or printing teachers who have this problem on hand now, I would like to have them come up at the end of this meeting, after the discussion, and help themselves to one of them. They are all quite good for the grade of boys that I am teaching in the school. It must be remembered that this is seventh and eighth grade work. I have read several articles stating that you can't teach an eighth grade boy printing appreciation. They claim that if you hold a good piece of printing in one hand and a bad piece in the other, he will pick the good one possibly, but when you ask him why, he can't tell you. I think our classes can tell the difference. We place the greater emphasis upon appreciation and development of good taste. Someone asked me the other day what I meant by good taste and being rather young in the field I couldn't think of such good definitions, as the ones given here at the meetings, so I told him it was not good taste to have a golden oak library table in your home at the present time. That would be poor taste.

I am going to leave the samples on the platform here. I wish that each of you who is interested in art would take them because the boys have gone to a lot of trouble in making them and I would hate to have to take them back. They are fine illustrative material to show your classes.

“Do Industrial Arts Exploratory Courses Function As Guidance Factors?”

W. H. STONE

Director of Vocational Guidance, West Allis High School,
West Allis, Wis.

THE title of this paper is stated in the form of a question because the purpose of the paper is not to state either opinions or facts but to raise questions and to point out certain fields where we industrial arts teachers can improve our courses so that they will function better in the lives of the boys with whom we come in daily contact.

We are all no doubt familiar with the work of Professor Koos in his efforts to determine the aims of functions of the junior high school. You will recall that he examined several hundred school documents which contained statements as to the aims of the junior high school. He also tabulated several hundred statements made by educational leaders concerning the aims of the junior high schools. Time will not permit a discussion of all of the claimed “functions.” For our purpose it will be sufficient to note that 40 per cent of the documents examined made claims that one of the main functions of the junior high school is “exploration for guidance.” In other words, it is claimed that the seventh to ninth years inclusive of child’s schooling are the years when he should meet with a wide variety of experiences for the purpose of helping him to discover his own interests, abilities, and aptitudes. It is further claimed that the junior high school is the type of organization that should, furnish, or is furnishing, these contacts and experiences. The junior high school is claimed to be the agency that introduces the child to the economic and social world with which he is soon to come into intimate contact.

This study was made by Koos nearly ten years ago and were a similar study to be made today it is perhaps safe to say that the exploratory function for guidance purposes would now rank even higher than at that time in the minds of school authorities and educational leaders.

It would be interesting to make a study to ascertain just how many devices have been used and just what school subjects have been reorganized for the purpose of attaining the exploratory objective in the junior high school. One need only mention the courses to which the word “general” has been prefixed to get an idea of the extent to which attempts have been made to broaden the scope of the school

studies for the purpose of giving the pupil a preview of the world which lies before him. The word "tryout" has been similarly used. In addition to this, extra curricular activities have received considerable recognition as agencies that offer experiences to the pupil to aid him in discovering and developing his own abilities.

There is perhaps no activity in the junior high school which has not laid claim to exploratory values. A principal of a large junior high school was recently asked what courses in the school he considered to be exploratory courses. After a moment of reflection he replied: "All of them." If one were to make a canvass of the objectives of all of the junior high school offerings he would probably find no subject in the curriculum but what made claim to a greater or less extent, to exploratory values. One who has read books by educational leaders will certainly find such claims.

However, when we come to search for statements of fact to show that the junior high school courses are actually functioning as guidance factors in the lives of the junior high school pupils, we search in vain. We seem to have proceeded upon the naive assumption that the junior high machine is an automatic one and that when once set to work it needs no further attention but to feed in the raw material. We have not even taken pains to inspect the output to see whether it is turned out according to the standards that we have set.

Perhaps no class of teachers in the junior high school has been so persistent in its claims as to the "finding" values of its courses as has that of the industrial arts teachers. One need only to read a few of the books written by leaders in industrial education or study the statements of the objectives of these courses to verify this statement. But here again one must search in vain for objective evidence that the industrial arts exploratory courses are actually aiding boys to discover their own aptitudes and abilities with respect to the various occupations represented by the shop courses. Neither can we find evidence that these courses have been important factors in shaping the careers of boys who have taken the courses.

Before proceeding further, it might be well to define the term "exploratory" as applied to industrial arts courses. For our purpose we will base our definition on the statement of Briggs that one of the main objectives of the junior high school is: "To explore, by means of material in its self worth while, the interests, aptitudes, and capacities of pupils." An industrial arts exploratory course is, then, one which consists of material "in its self worth while" and which is so organized as to offer a wide variety of experiences and contacts which will be of aid to the boy in discovering his interests, aptitudes, and capacities with reference to the occupation, or occupations which the course represents.

In the discussion which follows no accusation will be made as to

the failure of industrial arts courses to function as guidance factors; neither are claims to be made as to their value. As stated in the beginning, I shall attempt to raise questions. Claims will be made only when supported by factual evidence.

It appears to me that we must answer at least three main queries before we can rightfully claim actual exploratory values for our courses or makes claims as to their values in aiding boys to plan their future careers.

1. Are we certain that the courses do actually offer opportunities for exploration in the fields of the occupations that they aim to explore, and that the courses offered bear some definite relation to the occupational opportunities in the world of occupations?

2. Are our courses so organized and conducted as to discover interests, aptitudes and abilities?

3. If the courses are giving us a knowledge of the boy and his abilities, are we making use of that knowledge in our efforts to aid the boy in planning his own life career? If not, how can we do it?

In an attempt to find answers to these questions a questionnaire has been devised covering the above points in detail. It is planned to send it out to several hundred junior high schools all over the country. It has already been sent out to thirty-six schools in the state of Wisconsin which are maintaining some sort of junior high school organization. The list was furnished by the state department of education as a complete list of such schools. As yet the returns are too meager to use as a basis for conclusions. However, eleven replies, principally from the larger cities of the state outside of Milwaukee, have been received, and in as much as they show a rather striking uniformity of response, the results are perhaps worth presenting.

A check list was first included to ascertain what courses were offered throughout the state. Ten of the eleven offer wood work; eight, drafting; three, printing; three, electricity; three, sheet metal; two, machine shop; one, brick and cement work; and one, free hand-drawing. None offered a general metal course, and one offered no shop courses at all.

I might state, parenthetically, that the list included thirty-seven schools, but I have not included our own school in the returns. Had I done so, one general metal course would have been listed, as we have a general metal course which includes units in machine shop, bench work, sheet metal, moulding, and forging. It appears that ours is the only school in the state offering such a course.

Free-hand drawing and brick and cement work were not included in the check list, but one school wrote them in blank spaces provided for that purpose.

If these junior high school shop offerings are typical for the state, and I have reason to believe that they are, the results are worth considering for a moment.

A perusal of the report of the U. S. Census Bureau, 1920, shows that the number of males over ten years of age gainfully employed in the principal wood working industries of the United States is as follows:

Carpenters	892,013
Cabinet makers	48,159
Coopers	19,066
Sawyers	33,800
<hr/>	
Total	993,038

These figures include apprentices in these occupations.

In contrast to this we find that the number of males (including apprentices) over ten years of age gainfully employed in the metal working occupations is as follows:

Machinists	934,102
Moulders and casters.....	123,688
Boilermakers	80,093
Tinsmiths, coppersmiths	76,772
Blacksmiths, forgemen	224,075
<hr/>	
Total	1,438,730

If we add to these figures 608,705 semi-skilled and unskilled workers on the building trades and 1,472,800 such workers in the metal trades we have 1,506,678 workers in the wood working trades as against 2,911,530 workers in the metal working trades.

If we compare the school offerings with these figures it is apparent that the economic importance of the occupations was not taken into account in determining what courses are to be offered, or else that wood is offered for some other reason than that of exploration for guidance. In answer to the question: "Did you take into account the economic importance of the occupation from the standpoint of the number of workers employed therein?" four answered "yes," one answered "no," and six left the question unanswered. The four who answered "yes," did not indicate in the space provided the rank of the occupation, nor did they give the source of the data.

A checking of the processes taught and of the tools, machines, and materials used indicates that from this standpoint the shop courses give to the boy a fairly good idea of the nature of the occupations. The standards for accuracy seem to be as high as is ordinarily expected of apprentices, and outside of the fact that little or no time is devoted

to turning out jobs on a production basis, the shop conditions are made to approach as nearly as possible the conditions in industry.

In summing up this point, it seems that in the state of Wisconsin the junior high school shop offerings are principally wood work and drafting and that no data in regard to the economic importance of the wood working occupations was taken into account in determining what shop courses were to be offered. The wood working courses do, however, furnish contacts and experiences that might be used for vocational exploration purposes. It would be unsafe to assume that the condition in Wisconsin is typical of that existing in other states, but one might hazard a guess that it is. Further data is to be gathered to find the facts.

Let us now pass to a consideration of the question: "Are the junior high school industrial arts courses organized in a manner to discover aptitudes, interests, and abilities?" The answer to this question is that we do not know. Here lies before us a wide field for research, experiment, and constructive study. Do we know just what abilities are required to pursue a shop course with success? Only two of the questionnaires which have been returned indicate that the teachers of the courses have even given thought to this matter. One replied "Natural mechanical ability." The other replied "Above average scholastic ability and a natural tendency toward mechanics and work." If we do not know what aptitudes we are attempting to discover or develop, how can we hope to discover or develop them? How can we organize our courses in a manner that will reveal the aptitudes of the child until we know what sort of aptitudes are supposed to be revealed through the shop experiences?

We have probably been on safe ground in assuming that the performance of jobs in the shop will reveal to some extent a certain degree of mechanical ability. But how about artistic ability, executive ability or leadership, initiative, dependability, cooperation, creative ability, and many others that might be mentioned? Is it possible to make a reliable list of abilities and aptitudes that we might reasonably hope to discover and develop through our shop courses and then proceed to find ways and means through our shop offerings to identify and to some degree measure them? I must leave the question unanswered, for as yet we are still in the darkness.

But our ignorance in the matter of discovering, developing, and measuring of traits and abilities should serve as a challenge to us to go ahead and do something about it. At the risk of rushing in where angels fear to tread, I suggest the following as starting points:

1. Make a more thorough analysis of activities than we have yet made and think more in terms of activities and a little less in terms of jobs and processes when laying out our course.

2. Give more careful consideration to the matter of teaching method.

3. Devise ways and means of measuring other outcomes than knowledge.

Five of the persons who returned the questionnaire indicated that the course was laid out in terms of jobs, five indicated that they had given thought to processes, none seem to have been thinking in terms of activities and five left the question unanswered. To me this indicates that we are thinking in terms of subject matter rather than in terms of human beings. We are teaching shop courses and not boys, where the reverse should be true.

The question of teaching method is naturally a corrolary to the point just mentioned. About one-fifth of the time seems to be given over to the teaching of related information, and four-fifths to shop work. This may be a fair division of time, for it is in the activities of the shop periods that we must hope to discover the boy, or rather where the boy is given the best opportunity to discover himself. But it is in these shop periods that the question of method needs the major consideration, for it is here that we have opportunity to give attention to the boy and his individual needs.

As shop teachers we are being required to teach larger and larger classes. We can no longer have the intimate contacts with the boy that we formerly had. Nevertheless, we must find some means of giving instruction to the boy as to the best method of doing his work. At present there seem to be three methods in vogue. The following table lists these methods and indicates to what extent they are used. The figures are taken from the returns of the questionnaire.

	Yes	No	No reply
1. Pupils plan their own jobs.....	5	3	3
2. Job sheets	6	2	3
3. Blueprints and specifications.....	7	1	3

We cannot enter into a discussion as to the relative merits of these three methods, for such a discussion would be fruitless. As a matter of fact, it is quite likely that all three have their merits and should be made use of at all times. No one method should be used exclusively. Some pupils may be found who are not capable of planning their own jobs. Such pupils must be taught the universal language of industry and learn to use blueprints. Perhaps a well-illustrated and well-written job sheet will aid them in visualizing. It appears to me rather doubtful whether creative ability can be discovered through the exclusive use of job sheets or blueprints. Perhaps one method of discovering creative ability is to give each an opportunity to plan a job.

Many schools divide their grades into so-called mental ability groups. We who have our classes so grouped have an opportunity to determine the truth or falsity of the familiar conception that those of the lower "mentality" are motor minded. I find no evidence that we have yet attempted to do this. Can we devise some method of determining whether or not one group responds better to one method and another group to another method? If so, we can differentiate in our methods and class organization as well as in our course content for the groups of different levels.

Much more could be said about the matter of method, but we must leave it with the suggestion that it is still an unexplored field from the standpoint of discovering special abilities and aptitudes.

The last main point for our consideration is the use that we are to make of the knowledge of the boy that is revealed through the exploratory courses.

We might grant that we have been discovering abilities and aptitudes through the exploratory courses. But even if that be true, the knowledge of their existence has been only casually in the mind of the teacher. There is no evidence that anyone knows to what extent the aptitudes have been possessed by the boy. No records have been made available for the use of the advisor to aid him in helping the boy to plan his future school courses or his future vocational career. There is no evidence that the boys who take the courses have been placed in jobs where they can best use their abilities and aptitudes. There is nothing to show that occupational choices have been made as a result of taking a shop course nor that occupational choices previously made have been changed as a result of taking a shop course.

The keeping and use of such records must naturally follow the proper organization and teaching of exploratory courses. How can we even claim that the courses are exploratory if we do not know to what extent they have aided the boy in planning his future, or if we cannot say that as a result of our contacts with the boy, we have not been able to give him wise counsel in the matter of planning his life career?

Do our junior high school courses offer real exploratory experiences for the boy? Are they so organized and taught as to discover abilities, capacities and aptitudes, and to foster the development of these abilities? If so, have we made any use of the knowledge of the boy that we have gained by his study of the course? Do our junior high school courses actually function as guidance factors? You tell! I don't know!

“Arrangement of Instruction Materials”

R. W. SELVIDGE

Professor Industrial Education, University of Missouri, Columbia,
Missouri

SUMMARY

THE individual develops through his experiences. In order to develop him into the thing we wish him to be, we must provide experiences that will contribute to that end. That is the purpose of our schools.

The first step in the program is to determine what we wish him to do. The present organization of school work limits our program largely to the industrial or doing side of life. Since we do not know the vocations in which the individuals will engage it is necessary to give them experiences that will be of value to them without respect to their vocation. These purposes, for the development of which experiences must be provided, are as follows:

1. A well-developed interest in industrial affairs.
2. How to care for and use properly the things we buy.
3. An appreciation of good workmanship and good design.
4. An attitude of pride or interest in one's ability to do things.
5. A feeling of self-reliance or confidence in one's ability to take care of himself in an unusual situation.
6. A habit of orderly and methodical procedure in the performance of any task.
7. A knowledge and understanding of the conventions of mechanical drawing and the ability to express accurately one's ideas by means of a drawing.
8. Elementary skills in the use of the more common tools and machines and in the methods of modifying and handling materials, in order to make them conform to our needs.

Every experience provided should be selected because it is believed it will make a positive contribution to one or more of these desired ends.

Trade training is given with a view of developing a high degree of efficiency in a narrow range of activities. It is limited to those experiences which will contribute to the individual's success in his particular vocation.

The training for a trade is bound up in three things:

1. What we wish the boy to be.
2. What we wish him to know with respect to his trade.
3. What we wish him to be able to do with respect to his trade.

When these things are determined we should select experiences which will make a positive contribution toward the realization of such purposes.

"Some Points in the History of Costume Applicable to the Present Day"

VICTORIA KLOSS
Hiram College, Hiram, Ohio

A CERTAIN kind of enjoyment comes from being assigned a ready-made topic. Sometimes that pleasure is welltinctured with a feeling of amusement,—on the occasion, for instance, of an initiation when one is forced to talk about some impossible subject, such as, "How many ghosts can sit on the point of a needle?" I listened once to a victim trying to justify biologically the "Squizzikum Squees that swallow themselves," those creatures of Whitcomb Riley's fertile imagination. Perhaps that pleasure is likewise tinged with anxiety for the scholastic candidate who is awaiting the topic for his dissertation.

But whether amusement or anxiety is uppermost, nevertheless, there always lurks in the background a portion of enjoyment from the experience. This is for the two reasons,—in the first place because there exists the element of chance, and humanity always enjoys a lottery or grab-bag experience, the seeing what it will draw. In the second place a topic dished out to one on a silver platter comes as a species of challenge such as is lacking in a topic which one has carefully prepared for himself.

This challenge came most forcefully to me when asked to speak about "Some Points in the History of Costume Applicable to the Present Day." I shan't deny that both the aforementioned accompaniments of amusement and anxiety were present. At first glance I couldn't think of anything in the history of costume which would have even the remotest relation to our present day. We may study the history of architecture so that we can copy a beautiful old Colonial home; we may read a history of furniture so as to enable us to purchase a genuine antique Chippendale or Sheraton; we might even study the evolution of cookery so as to make pies like mother used to make. But we aren't going to study costume history so as to purchase an 1890 model.

Of course there are many interesting discoveries made in a study of costume development which illuminate many of our costume customs today. Fashion is a wandering gypsy in her love for change of scenery, but like a gypsy she clings tenaciously to many relics of the past. In dressmaking we are taught that buttons should be placed on the right hand flap in men's clothing and on the left hand on women's—a vestigial remnant from the times when men needed the free use of their right arms for fighting, and women their left to carry their chil-

dren. Presumably, neither could cease these operations long enough to button up his or her clothes. We smile at the senseless buttons on the back of a man's coat, but these were very useful in the days when the vehicles of locomotion were not as commodious as the automobile and the aeroplane. They enabled the equestrian to preserve his jacket from the creaking of the leather saddle. Even the hat band and bow on hats hark back to the time when bonnets were made entirely from one piece of material and in the backward swing of the fashion cycle they play a somewhat similar role today. We wear our hat bows to the left so that they may not interfere with the full play of our swords! The present stitching in our fabric gloves is reminiscent of the old-style lacings.

Modern fashions, as such, are supposed to have sprung, like Venus, full-born in the middle of the eighteenth century. At that time many forces combined to alter conditions of living and consequently our style of dress. The American and French revolutions brought in their wake a spirit of democracy which made possible similar clothing for nobleman and commoner. The increased facilities of manufacture and transportation created by the industrial revolution brought Parisian fashions within the financial reach of all. Nevertheless, clothing from ancient days has not changed so radically as is commonly supposed. The tunic and the mantle have formed the foundation of woman's costume since time immemorial. Only their contours and amplitude have altered with the ages. The Egyptian girl in the reign of Thothmes III, the Pharaoh of the oppression, wore a garment which, if the skirt were shortened and had some pleats inserted, might step out on the golf links today. On one historical plate of Egyptian costume I even noted the new neckline, V shaped, shirred vertically so as to support a bow, that feminine touch which marks the gowns of 1929. As for the Egyptian headgear—a close fitting helmet with ear tabs and the hood hanging down over the shoulder in the back, is that not revived in the down-in-the-back models of the early season? In behalf of the man, Mr. Rhead, author of "Chats on Costume," says that "One might hazard the contention that a painter would be perfectly safe in introducing a pot-hat and a pair of trousers at practically any period of the world's history—not in conjunction; no, that glorious consummation was reserved for this happy age of ours." The Phrygians and Asiatics wore trousers, and a cameo of Paris shows him arrayed in the same doublet and hose arrangement.

Even to briefly review the frivolities of fashion, there is nothing new under the sun. On the papyrus at Turin we have almost a caricature of a lady rouging herself. In Kings II we read that Jezebel "put her eyes in stibium," the bella-donna of her day. Stays have always been a part of feminine attire, though they varied in the amount of pressure they induced. With the freedom loving and athletic

Greeks, for instance, this part of the costume consisted merely of three supporting bands, the loin band, the waist band, and the thoracic band. We have merely dispensed with the center one, the connecting link between the two. The Romans frizzled their hair. The Egyptians progressed a step farther and wore false beards. White lead was used in place of our modern powder.

And so on, the list might be enlarged indefinitely. But the instances are perhaps quite trite to all students of the subject and even to the casual reader who is at all interested in the story of how the world has been clad. But our topic is not as commonplace as the above observations. In reality it is a challenge both to artists and home economists who are including costume history in their curricula. What points in the history of costume are applicable today? Is there anything in the study of costume which helps us to live today? If not, why teach it?

Our forefathers are censured for teaching with too great a stress on cultural or academic values. The pendulum reswung and the focus may have been too largely upon the practical. As a matter of fact, we know that neither basis is sufficient unto itself. A man isn't educated because he can parse a Latin verb or because he can harvest a field of wheat. Mr. Glenn Frank's definition so often recurs to my mind, "An educated man is an intelligent leader in one field, an intelligent follower in many,—a student of the particular with an appreciation of the general. And to this we would add that he should be able to correlate what he has learned and to see how it fits into a niche in the development of mankind.

The story of costume fits nicely into this picture. To the artist its chief value is probably practical. On the other hand it links continually with historical events of academic value. For the artist I cannot presume to evaluate its practical application. But I feel strongly that on the academic *solely* the history of costume is too insignificant to merit much study. It is of importance *per se* that under Louis, France recognized the American colonies, but it is merely interesting that his wife carried her dainty imperious high-towered head down the years to the guillotine. But if not solely for its practical or solely for its academic value, yet for a combination of these with stress upon its sociological aspect, the history of costume presents a valuable study for us today.

Let me illustrate the angle of approach if you as a layman would reap the best harvest from your study of costume and then try to show why this is necessarily so. To those in whom a study of costume history awakens no delights I like to quote a little sermon delivered by one of Jane Austen's children to those who had ruined what might have been so interesting. Katherine Tilney in "Northanger Abbey," was questioned concerning her fondness for history. "I read it" she

says, "a little as a duty, but it tells me nothing that does not either vex or weary me. The quarrels of popes and kings, with wars or pestilences on every page,—and yet I often think it odd it should be so dull, for a great deal of it must be invention. The speeches that are put into the heroes' mouths, their thoughts and designs—the chief of all this must be invention, and invention is what delights me in other books." Costume history is a particularly rich field for invention, for a conjectural study of human behavior, and if properly studied it will give us much that will be applicable to one living today.

Mankind has certain fundamental human motives and many of them influence the clothing he wears. Nystrom in his most recent volume, "The Economics of Fashion," includes a long category of these. Chief among them we find—1, the desire for existence; 2, the love of the opposite sex; 3, the love of children; 4, the cry for companionship and friendship which makes man such a gregarious animal that he willingly accepts the dominion of a king on one hand and yet seeks to outrival his fellows on the other. Curiosity, discontent, striving—all and many other passions and desires are planted in the human breast and motivate our actions.

Man strove to exist. Consequently, he donned garments to protect himself from inclement weather. He wished to be distinguished from his companions. So the earliest savage wore his necklace of trophies for decoration. And then somewhere back in the garden of Eden, it was rumored that it was improper not to wear clothes. And immediately man's social relations were jeopardized unless he complied with custom.

If mankind wears clothing because of fundamental human motives, then his interest in clothing is fundamental and inextinguishable. It may differ with various individuals in proportion as one motive predominates and another lies dormant in his character. For instance, we have Mary Roberts Rhinehardt's woman who said, "Clothes, I am going down town. If you want to come along, hang on." Was it Oliver Goldsmith who never would buy a new top-coat if the old one was still able to cover him? But most of us are not so impervious to a consideration of raiment. That point, at least, even if no other is apparent, is obvious from our study of costume. The subject is a humanly motivated one and has been so through the generations.

But we are not concerned with proving that costume history is interesting. We are concerned in showing that it is worth while. If we wear clothes to protect our bodies, for ideals of decoration and for principles of decency, then the clothing man has chosen, has always affected 1, his health; 2, his artistic sensibilities and 3, his social efficiency. Worthwhile knowledge, as defined by Spencer, consists of that which offers most useful preparation for life. What touches more

directly upon preparation for living than the above trilogy of man's interests? Hygiene, art and sociology,—what can we make of these?

To consider the first topic. A study of costume history shows us that our clothing has frequently violated our standards of health. The powder with which we clog our pores, and with which we have clogged them since the days of the Pharaohs, the lacing which appeared in France with Catherine de Medici and lasted to our modern generation, the foot bindings which are the heritage of the Chinese woman, all testify to the fact that there couldn't have been any physicians in the land at the time of such atrocities. Rather they show us most plainly that woman has always subordinated her health to her conception of beauty and will probably always continue to do so. Clothing worn for protection did not come first in the order of evolution, nor is it considered first. In the winter of 1800, when diaphanous garments were the rage in Paris, one doctor claims that the mortality in the capital mounted to an alarming extent. But it was not the death rate that banished transparency. Nor was it fainting spells which finished wasp waists, nor tumbles which exterminated the hobble skirt. Our mothers trailed the avenues and a Parisian paper of contemporary date contains the following interesting announcement, "The administration of la ville de Paris has it in contemplation to do away with the scavengers in our good city, as they say it is useless expense to pay for doing that which the ladies so kindly perform gratis in walking through the fashionable promenade." It would be fine indeed if they won't. We still hobble on three-inch spikes, we bundle our necks with fur and wear chiffon hose, we bandage the upper portions of our body to an extent decried by the author of a recent article on cancer, we frizzle and dye and thus destroy the health of our hair and we don't wear the amount of underclothing which might be considered adequate for our winter climate. And yet many claim today that the athletic girl has come into her own, and that the modern garb, if not picturesque, is at all events the pinnacle of healthy dressing. I do not doubt that it is a great improvement over some of its predecessors, but the above abuses merely drive home the lesson that modern dress gives us more freedom because the ideal type of girl has changed from the clinging vine to the athletic type and the youth is playing up to the role. Considerations of health had little to do with the transformation. For reformers here is one point in the history of costume which is applicable today. If clothing standards are to comply with the standards of health, hygiene lectures will be ineffective unless the conceptions of the race are changed so as to make the stylish figure of the age one of health as well. Witness Ziegfeld's triumph for American womanhood in returning the well-nourished girl to the stage.

Art in relation to clothing occupies a more important position

than its precursor, because here to a limited extent, a direct appeal can be made. Nevertheless, although adornment was the first reason for clothing ourselves, such adornment was not primarily that we might be beautiful, but rather that we might be distinguished, not so much that we might be attractive as that we might be attractive to others. This two-fold function of our decoration is at once an advantage and a hindrance. It is to be lamented because it makes those decorations which, if worn with the proper air, set a man apart from the mob, an object of beauty in the eyes of the mob whether they be intrinsically beautiful or not. The story is told of the introduction of the little short coat called the Spencer into the society of the early eighteen hundreds. Lord Spencer, a dashing young gallant of the period and one whose clothes were always up to the minute, laid a wager with a friend, that he could set a style in a week. Whereupon he chopped off the tails of his frock coat and all London did likewise. I sometimes think we are all Titanias and can't see the ass's head for the gold dust in our eyes.

How absurd and hideous a fashion may appear when its light has gone out. What a beautiful two-horned head-gear the lady of the fifteenth century wore. I have always been thankful that the heroines of medieval romance lived before this period. Can you picture Elaine or Guinivere in such a dual pronged escoffion? And next the ruff. If you are at all familiar with Jan Muller's engraving of the Infanta Isabella Clara Eugenia of Spain, you will appreciate how this deformity could ruin an otherwise attractive face. What must it have done to one which could little stand such a cruel frame? We could enumerate other atrocities, the garb of the "Merveilleux," violating every principle of art simplicity, hoops, bustles and leg o' mutton sleeves with their distortion of the human figure. And the modern ages are not exempt. A few years from now I hope we shall laugh at knee length skirts which cut off a garment just where the folds of the material commence to be beautiful and at the tubular silhouette whose chief glory seems to be the elimination of every fold which attempts to be graceful. I say I hope we shall laugh, as we shall, if women don't become as artistically starved as men. In which case in place of one stove pipe silhouette we shall probably don trousers and have two.

This is rather a dismal picture that our survey of costume has brought to us. But so far it is a half conceived one and only half painted. Clothing has been beautiful,—I believe more often than not. In the first place many periods were truly artistic in their embellishment of the human race and all of them, even the worst, could teach us some principle from which we might benefit. We seem at present under the sway of Egyptian aesthetics. The simplicity of their silhouette is not to be forgotten, but it is not as interesting as that of the Greeks. In their dress we find what artists have proclaimed the acme of art

in clothing,—simplicity without loss of beauty, lines suggesting and revealing rather than exposing the human form, rhythm through its variety of fold, painstaking workmanship which preserved it from becoming tawdry. As artists you know well the standards of perfection which their garments attained. And yet similar raiment would be impractical for our Northern climes and active lives. And, although artistic, they could not have attained the sumptuous beauty which came with the gorgeous materials of the Renaissance. And as the style of the Greek garment was so largely dependant upon that of the wearer there may have been some mishaps. There would indeed have been great need for developing that subtle eclat called "it," when wearing such voluminous robes. The woman of the early middle ages took the heritages left her by the Greeks and Romans and in some ways improved upon it. Her costume with its semi-fitted tunic falling in folds in the skirt, with the mantle thrown over the shoulder and the simplest of wimples thrown loosely over her hair made a picture which even the Raphaels, Bellinis and Boticellis of the later golden age immortalized in their Madonnas. Then enter the surcoats and the hair nets and the beauty of simplicity is lost for the beauty that was the Renaissance, the beauty of grandeur and of sumptuous materials. And so on through the ages. If we can characterize our apparel chronologically I would say that today our clothes possess a sophisticated artistry with their subtle color schemes, their compliance with the laws which govern a pictorial masterpiece; our grandmother's clothes possessed a quaint quality; the 1700s possessed exquisiteness with their dainty silks and their Mechlin laces; the costumes of the 1600s at their best were robustly picturesque; in the late Renaissance, clothes were gorgeous, but in the early period of the Renaissance, when Leonardo's Beatrice ruled in Milan, clothes if ever, were truly beautiful.

It is difficult to gain a correct estimate of the beauty of historic costume, for cartoonists have always distorted it and artists have always glorified it. An age must be truly barren when no painter arises to sing its praises. We venture to make the statement that no artist would of his own volitions choose a gentleman in a swallow tail for his canvas. And isn't it somewhat of a censure that the modern woman has no champion? For it is interesting that if your costume has artistic possibilities, no matter what you may do to make it ugly, the artists of your age manage somehow to make it beautiful. I presume each of us plays favorites with pictures and I have a favorite chronological list of costume paintings which illustrate this point. The earliest of these would be Boticelli's "Giovanna Albizzi with Venus and the Graces." Here in his lovely heroine and his graces, just a little stiff perhaps, the artist has given us the beginnings of modern costume. This type of costume I have already alluded to as possessing a more complete compendium of those essentials of beautiful

costume than any other. Of the early sixteenth century, before the appearance of the farthingale, I can think of no more beautiful portrait than that of Lucrezia Panciatichi, by Bronzini. Though slightly more elaborate than Boticelli's painting, we still see beauty of material unmarred by superfluous ornament or distorted shape. A yoke of exquisite lace lightens the lady's face as the sole center of interest.

Velasquez had a more difficult task to make artistry out of the farthingale. You can't make suppleness and rhythmic beauty out of whalebone. But with the royal princess Marguerita he balances the skirt with the hair and makes a portrait which cannot offend. It illustrates at least one point and that is that when a costume fulfills all other requisites of artistic composition and yet lacks grace, lacks softly flowing lines, we are apt to designate such a costume as quaint. The rhythm of a Japanese figure print we could never call quaint, but the costume of Ver Meers "Lady with the Pearl Necklace" answers the description exactly. Following Velasquez, Van Dyck conquers the ruff in his painting of Maria Louisa de Tassis, which so finely portrays both character and costume. How well the soft pleated frill frames her neck and face and the rhythmic line movement from light to light is skilfully accomplished through the placing of her cream colored ostrich fan. In the later seventeenth century Van Dyck turns the collar down and we have a man's costume immortalized in his pictures of "Bonnie Prince Charlie." While speaking of Van Dyck, I cannot refrain from calling attention to an amusing costume as well as pictorial anachronism in his "Virgin and the Donors." It was painted after the artist made his visit to Italy, and the Virgin and child are after the style of Rubens and wear the garb of the middle ages, whereas the donors are typically Flemish and middle class and are done with tasteful realism in the ruff and cap of the contemporary period.

Charles II is the period of Lorna Doone and the costume is epitomized by a much later artist, namely Sir John Millais. My favorite painting here is the one begun by Sir Edwin Landseer and intended to be an equestrienne portrait of the late Queen Victoria. However, it was never completed as such and Millais took the canvas and portrayed his own daughter in the costume of the Stuarts. The canvas is popularly known as 'Nell Gwyn.' If this particular oil is too sacharine to be tasteful to all, I would suggest **Millais'** painting of the Princess Elizabeth. In this not only contemporary costume, but contemporary furniture is as well depicted.

The head gear of the eighteenth century we recognize as ridiculous. Yet how lovely has it been made by Gainsborough, its snowy whiteness topped with a black velvet hat, counterbalancing the ample folds of the lady's gown. Such a bonnet was too picturesque to be

permanently lost and when it reappeared in fashion Riley sings of his sweetheart as,

“Just the airiest, fairest, slip of a thing,
With a Gainsborough hat, like a butterfly’s wing
Tipped up at one side with the jauntiest air,
And a knot of red roses sown under there
Where the shadows are lost in her hair.”

This illustrates another point which I shall not have time to enlarge upon, but which I believe will bear investigation, that when good art prevails fashions live longer, look less absurd when passe and even recur more frequently than when art is poor; and that, as a nation becomes art educated, costume in violation of art is not liable to become full fledged. The eighteenth century may have been one of gee-gaws and tawdry ornament. Yet witness what Watteau has done with this most feminine of costumes. The painting after Romney of Mrs. Anne Warren is to me one of the loveliest things that has ever been done in costume painting. It is such a happy combination of the unadorned, the sumptuous, the artistic, the picturesque and the beautiful.

To hasten through the nineteenth century, we know what David and Manet have done for the eighteen hundreds. But is Richter’s “Queen Louise,” too commonplace to yet be the loveliest of them all? Winterhalter in his portrait of the Princess Victoria in 1836, did his best for the costume of that period, which was one of the ugliest that has ever existed. But his later picture of the Empress Eugenie and her court has real claims to perfection of garment. One exception proves the rule. No artist, to my knowledge, braved the bustle. And yet, had the whole thing been softened up a bit, with its bulk balanced by the teetering stride and the tiny hat perched over the nose, it had its possibilities. Our “down in the back” and mermaid silhouettes today are beginning to “cash in” on some of them. Sargent and even Gibson carry on the artistic costume tradition down to the early nineteen hundreds and there we must stop. Nineteen hundred five to fifteen is a deadline,—peg-top and hobble skirts, lines of the waist in contradiction to those of the skirt, each new craze treading on the heels of its forerunner, nothing stable because nothing good. Commercialism was beginning that cry for newness and cheapness which it has taken twenty years to begin to live down.

We have brought forth no artists to portray the beauty of the modern costume, for as yet the modern costume isn’t beautiful enough to merit portrayal. But it very soon will be. Artists such as never before created woman’s dress, sit in on its inception, for they are catering to a public alive and increasingly art conscious. And in addition, this age has made already a distinct contribution to the

evolution of costume in the utility of the modern costume. If we are wise enough not to make a fetish of this again, not to make a costume useful at the cost of its beauty, simple at the cost of its interest, then the twentieth century may stand out in the costume field as it is striving to do in the field of interior decoration and of the fine arts. One other transcript from the writing on the wall.—Modern costume will have to regard what is commercially known as “trading up” before it can hold its place among the costume of the ages. We are serving utility by making accessible styles in cheap garments, but we are jeopardizing our pretensions to real art. And our heritage in the field of costume art should be such as to enable us to succeed beyond any previous age. That is—if we are not in too great a hurry—if we are not fearful lest our successes be not immediately acclaimed.

Two thoughts, apropos come to me. The first from Josef Conrad in “The Mirror of the Sea,” “The sort of understanding I mean depends so much on love; and love, though in one sense it may be admitted to be stronger than death, is by no means so universal and sure. In fact, love is rare—the love of man, of things, of ideas, the love of perfected skill. For love is the enemy of haste; it takes count of passing days, of men who pass away, of a fine art matured slowly in the course of years and doomed in a short time to pass away, too, and be no more. Love and regret go hand in hand in this world of changes swifter than the clouds reflected in the mirror of the sea.” The second comes from Somerset Maugham in “The Moon and Sixpence.” “Why should you think that beauty, which is the most precious thing in the world, lies like a stone on the beach for the careless passerby to pick up idly? Beauty is something wonderful and strange that the artist fashions out of the chaos of the world in the torment of his soul. And when he has made it, it is not given to all to know it. To recognize it you must repeat the adventure of the artist. It is a melody that he sings to you, and to hear it again in your own heart you want knowledge, sensitiveness and imagination.”

I should like to close this survey of the considerations which costume history may bring to us with a brief mention of its sociological aspect which underlies all other aspects, which binds them together and, which, for this is the crux of the matter, renders them worth while. We scoff at fashion, yet fashion exists against all opposition. We won't be its slaves; neither will we go out on the street attired in a Merry Widow hat. Supremacy laws are made even in this enlightened age. Certain bathing beaches forbade one-piece suits and the bathers went elsewhere and wore what they pleased. Last week the Literary Digest denounced high heels, but the boot shops will sell them nevertheless. Even the pulpit is occasionally foolish enough to trifle with such passing fads as bobbed hair. Health and beauty are

the ends we wish to attain and fashion but gives us the means. If we fail to comprehend the maneuvers of this all powerful force, we have missed the biggest point of interest to us in a study of costume. Why not be subtle enough to make use of fashion? President Hoover, in his recent address to the newspaper convention at the Waldorf, plead with them to create sentiment in favor of law observation. Make it fashionable to observe the law and the battle is won. What is fashion? Is a study of costume from a fashion standpoint trivial? Fashion is nothing in the world but the trend taken by the gregarious instincts of mankind, the product of our common thoughts, common ideals and common souls.

Carlyle says in "Sartor Resartus," "You see two individuals, one dressed in fine Red, the other in coarse threadbare Blue; Red says to Blue: 'Be hanged and anatomised;' Blue hears with a shudder, and (O wonder of wonders!) marches sorrowfully to the gallows; is there noosed-up, vibrates his hour, and the surgeons dissect him, and fit his bones into a skeleton for medical purposes. How is this? . . . Red has no physical hold of Blue, no clutch of him, is nowise in contact with him; neither are those ministering sheriffs and lord-lieutenants and hangmen so related to commanding Red, that he can tug them hither and thither; but each stands distinct within his own skin. Nevertheless, as it is spoken so is it done; the articulated Word sets all hands in action; and Rope and Improved-drop perform their work.

Thinking reader, the reason seems to me two-fold: First, that man is a spirit, and bound by invisible bonds to all men; secondly, that he wears clothes, which are the visible emblems of that fact. Has not your Red hanging individual a horse-hair wig, squirrel-skins and a plush gown; whereby all mortals know that he is a judge?—Society, which the more I think of it, astonishes me the more, is founded upon cloth."

Tennyson says:

"I will not shut me from my kind,
And, lest I stiffen into stone,
I will not eat my heart alone."

Costume helps us play this part in life. Its sociological importance is one of the points applicable today which we should gain from a study of its development. Through this we may learn how costume is expressive of the aesthetic ideals of a race and so gain knowledge of cultural value. Or perhaps we belong to those envied few in whose hands rest the beauty and saneness of our modern dress. For them the history of costume is not only of particular practical value, but of general value, as it shows them, these artist creators, the high mission they are called to perpetuate.

“Training Appreciation in the Classroom”

MRS. FLORENCE WILLIAMS NICHOLAS
Richmond, Indiana

THIS brief discussion of training appreciation will be centered around three points, first, why should we train appreciation?; second, what is meant by appreciation; and third, how can we train appreciation? Before we, as art teachers, can give the correct emphasis to the development of appreciation, we must have clearly in mind just why the child needs to appreciate the artistic. His needs will control the nature and emphasis of our teaching. Secondly, before we can train appreciation effectively, we must know what is meant by appreciation. What is it that takes place within the individual who experiences aesthetic appreciation? Surely we cannot train appreciation intelligently until we understand the psychological process. And third, we must develop a classroom method which definitely trains appreciation. We must know what kind of procedure is best to develop the highest standards of aesthetic enjoyment.

Our first question, why should we train appreciation, can be answered by any experienced art teacher. She has only to look about her to see the sad need for higher standards of aesthetic appreciation. Our houses are filled with ugly furniture, curtains, rugs and other furnishings; our streets are lined with rows of sad and drab little houses, and our stores are filled with gaudy, inartistic things, both cheap and expensive. Does the average individual have no need of art training? Without standards of good taste, how can he choose a house that is attractive? How can he furnish his house artistically? And it is not only in the larger purchases that standards of good taste are needed. How can a man select a necktie or a pair of socks of good design and color unless he has developed standards of appreciation? How can the housewife arrange the furniture in her living room effectively to know what is good and what is bad in interior decoration? The business man, too, has need of training in appreciation, so that he may select and arrange his wares in pleasing manner.

To sum up the idea expressed above, we can say that every individual needs training in aesthetic appreciation of the visual arts. Through such training he will develop standards of good taste that will help him in the many purchases, both large and small, which he will make. In the present day every individual is a consumer and as such he wishes to make his selections wisely. And therefore, his need for aesthetic judgment is obvious.

To many it may seem that in the above we have used the same argument frequently used for art work in the schools. In a sense this is true, but let us remember that an art course commonly includes more than the training of appreciation. Generally, a major portion of the time is given over to technical work. Technical training may or may not develop appreciation, as we point out later in this discussion. But for purposes of the present discussion, let us confine our attention to training appreciation as a means of developing standards of good taste. Everyone of us has need for high standards, but few of us need to draw, paint, or design.

Having considered the values of training appreciation from the utilitarian point of view, we will now consider it from the cultural viewpoint. To those of us who have experienced genuine aesthetic enjoyment, there is no doubt that appreciation of the artistic has true value. It is a source of enjoyment which makes for personal enrichment beyond measurement. The man or woman who can walk down the street and thrill to the beauty of a fine statue, a splendid automobile, or a wonderfully designed piece of architecture, has inner resources which make for a richer and deeper spiritual life. And relevant to this idea, it should be pointed out that such aesthetic enjoyment is free from that sense of possession or ownership which so frequently taints appreciation of the artistic. When walking past a shop window containing some lovely silk material, I said to my friend, "What a beautiful color and texture!" She replied, "It does not appeal to me. I do not think I could wear it." Her enjoyment in the beauty of that material was spoiled because she could think of it only with relation to herself. Let us make sure in our teaching that we train appreciation of beauty without regard to possession. Those who cannot enjoy a beautiful thing unless they possess it, fail to touch the depths of genuine aesthetic appreciation.

The second question under consideration, what is meant by appreciation, calls for an answer in psychological terms. Just what is it that takes place within us when we experience aesthetic appreciation? It is not an intellectual mental process, such as reasoning or recall, but rather an emotional reaction. Strayer and Norsworthy, in their book, "How to Teach," have defined it as follows:

"Appreciation belongs to the general field of feeling, rather than that of knowing. The element which distinguishes appreciation from memory or imagination or perception is an effective one. Any one of these mental states may be present without the state being an appreciative one. But appreciation does not occur by itself in an elementary state, it is rather a complex—a feeling tone accompanying a mental state or process and coloring it."

It is most important that the art teacher have a true understanding of aesthetic appreciation. Sometimes we mistakenly name history of

art courses appreciation courses. Unfortunately, most history of art courses are nothing but courses which require students to cram their memories with many facts. Their standards of taste in pictures are raised not one bit. They are told, of course, which pictures are considered best by great critics. But to tell a person that he should like a certain picture is no guarantee that he can honestly do so. We must find other means of training appreciation. The person whose judgment depends always on the opinion of the art critic gets no genuine aesthetic pleasure. His is a pseudo-appreciation.

Our third question, how can we train appreciation, seems most vital to the classroom teacher, yet she cannot learn the how of training appreciation without first understanding the why and the what. As yet little attention has been given to methods of training appreciation. It is a great field for investigation. In the following there are a few suggestions for planning the appreciation lesson.

1. Association and familiarity with objects of art is necessary in order to train appreciation. This is so obvious that it seems unnecessary to state it. But one has only to observe the barren conditions of most schools where art is a part of the curriculum. How can children learn to love the beautiful if they never see it? Do we expect them to acquire a taste for good literature if they have no good books to read? Our schools should be liberally equipped with good pictures, pottery, textiles, sculpture, and other objects of art. Without this we cannot hope to develop high standards of appreciation.

2. The selection of subject matter for appreciation lessons should begin with the things found in the everyday life of the child. A fifteenth century Madonna will not interest him so much as an advertisement or an illustration taken from the current magazine. It is useless to try and impose on him an interest in things which are foreign to his life. We cannot begin with the highest expressions of art in the sixth grade any more than we can give them Dante or Shakespeare to read. Let us not scorn the material at hand.

3. Directed observation and aesthetic discussion are necessary in order to develop appreciation. It is not enough to be surrounded with beauty. Too often we are blind to the objects of our environment.

4. Analysis and comparison is an effective and a natural method to follow. We have been warned against the very detailed analysis which of course kills enjoyment. But a certain kind of comparison is bound to take place anyhow. When a boy purchases a necktie he compares one against another and makes a final decision. Henry Turner Bailey has said, "Taste develops gradually through making choices with reference to some ideal." Let us give our classes frequent chances to make choices, to compare the good with the bad, and follow it with a discussion of *why* some things are beautiful and some are ugly.

5. Technical work may or may not help in developing appreciation. There is no doubt that it trains appreciation of technique and craftsmanship. But whether its value is greater than this, is questionable. It depends, of course, on how the teacher handles the lesson as to its value in training appreciation. If all the emphasis is on excellence of technique, there will not be much increase in the development of appreciation, but if the emphasis is put on how to express an idea and how to secure typical effects, then there is decided development of appreciation. In many cases the technical work is a definite hindrance to the development of good taste. How can the girl struggling to paint a respectable wall elevation think much about good effects on a real wall? And how can a girl trying to draw and paint a lady's figure learn much about how to dress.

There is much more to be said about the how, why, and what of training appreciation, but perhaps this discussion will serve to point out some of the primary considerations. If we have clearly in mind the nature of aesthetic appreciation and its value, we cannot help but plan and conduct our courses to that end.



“Our Changing Taste”

JANE BETSEY WELLING

Detroit Teachers College, Detroit, Michigan

OUR changing taste! It is so elusive and important and inevitable, so indicative of the future.

It is so elusive that most of us, belonging as we do to the generation which grew up in the past, find it difficult to do more than feel that a change is occurring. Yet it is so important that we must somehow do something to include it in our experience, because it is already in the present and will eventually contribute largely to the world into which the children with whom we are now working, will go.

It is so inevitable that it will go on developing whether out of, or in our control, because change, we feel certain, is one of the sure things in this fast changing environment with which science and industry is surrounding us.

It is so indicative of the future that we must hasten to devise ways to interpret and control these elusive and important and inevitable changes.

As teachers, directly in contact with the coming generation, it is vitally urgent that we do more than look at these changes which are occurring. We must interpret them. We must find the funda-

mentals, the realities which are constant. We must integrate, and never isolate the thousand and one experiences which we offer in school. We must search out points of contact and over-lappings. We must investigate reasons why and associate causes and effects, so that children's learnings will be a whole—and not disassociated parts of a jig-saw puzzle which no one has bothered to try to fit together.

And where and how shall we begin to study the problems which the changes have brought before us? Historically, probably—because the times that are, became so much more sharply defined in the light of the times that were. We may be, as we are so often told, on the threshold of a new era of civilization. At any rate all of us are seeing more things and doing more things and having a widening horizon thrust on us in a way which would have left our grandmothers and grandfathers amazed and breathless. They grew up to know what was to be done and how it was to be done and with whom it should be done. Consequently, in school it was sufficient for them to learn well a few certain facts and skills, and what-not from the books which had been handed down to them from the past, to be reasonably sure that they would find these same facts and skills useful as long as they remained living in their local environment.

Then what suddenly happened to us? We learned to drive horses and some "visionaries" gave us first the automobile, and now the aeroplane. Mr. Ford popularized running around the countryside. Consequently, almost everyone has acquired new limits of horizons, and almost everyone has seen things which his fathers and mothers could only read about. The new outlooks, the new experiences, the new facts, the new skills, have affected everything round about. Living conditions have gradually changed. Do you recall the pre-war motoring outfits for ladies, made up of large teetering hats anchored by means of voluminous, diaphanous veils which floated well out in the rear of the slowly moving vehicle to indicate speed? Contrast that memory picture with the slant on the evolution of the hat, which the choices of hats in the audience around you show. Historically, it is illuminating. Economically, new and radically different markets have been created. Socially, barriers have been erased. Dr. Eleanor Wembridge of the Cleveland juvenile court, said recently in Detroit that, "in appearance you can't anymore distinguish an educated woman from an uneducated one; a college graduate from a girl who left school at the beginning of the seventh grade; a lady, a teacher, a shop girl, or the so-called big business woman—they all look alike." And in this men have preceded women, they have all looked alike for several generations!

Historically, then, even when we hit only the high spots and touch only upon the obvious, we have clear indications of the changed appearance of these changing times and of the breathless speed of them.

And just here perhaps a few words about "Taste" and what it implies are necessary in expanding the subject of ever changing art. Time was, historically speaking, when a few people were recognized as having taste, and the rest of us had so little money and such clearly defined traditions that we had no use for it and were content to jog along without it.

Then, what suddenly happened to us? We acquired enough money, enough products, enough leisure, and a horizon so widened as to give us each room for his own choice. Even then we were content for a while to slip along the old aristocratic lines of least resistance and to let someone else, whom we were told *knew*, make all of our choices for us—the era of the *nouveau-riche* and the heyday of the pseudo-specialist in past cultures, "periods," he called them. But this evasion also passed, due largely to steady economic development which put more money into the hands of more people. More products, mass education, more leisure, all came upon us so quickly that we find ourselves today confronted with the unescapable demand that each of us make his own art choices, and most of us quite frankly realize that we do not know how to make them successfully.

Taken collectively, individual tastes control markets. We realize that our choices are controlled by our past experiences—our background. We realize that experiences come through activity—active and real contacts with the things that make up our present environment and which have moulded the traditions of our past. But do we realize that we must set the school stage so that children may have repeated experiences and contacts with the same realities in order that they may learn to make their choices, and in time develop a taste which will surround them with the fine things which we have let slip by?

Someone recently told me a tale of a small boy whose mother, a Californian by birth, took him on a visit to her old home in California, where he was able to pick luscious, sun-ripened oranges from a tree in the yard and to eat the juicy fruit "au naturel"—but the small boy at the first bite made a wry face and dropped the orange, exclaiming to his surprised mama, "I don't like it. I like the 'A and P' taste better." His mother, being a loyal Californian, never intended him to have such a taste!

And the story means just what in terms of taste? And of education for taste?

The problem seems very simple and very obvious when viewed from this direct angle, but it grows increasingly more complex and hazy when it is translated over into terms of practice in our particular jobs, as home economics and art supervisors and teachers.

We grow confused at every turn. We have learned that we do not acquire taste by acquiring art history, or art techniques and skills. But have we adjusted ourselves to this changing point of view? Al-

ready we have become familiar enough with history to realize that it alone cannot help us, because our environment is become so different that traditional historical solutions are incongruous in the light of our present needs. Of late, research has unearthed such a quantity of historical data of all sorts that much of the former glamor, which hung around history for its own sake, has dulled. We have come to view it, not as a final word, but only as the answer of another group of individuals somewhat like, somewhat unlike ourselves to the challenges which their environment and social living forced them to meet. Art history viewed in this way becomes not something to be learned as chronological and final and perfect, but as something to be understood in relation to traditions. The former view inevitably led to rote learnings, and copyings. The newer view leads toward understanding and interpretation which means, it seems to me, a far greater respect for art history through a sincere endeavor to find its real contribution to the solving of our own problems.

The time is so very brief. I can only insinuate that you may be interested enough to investigate and analyze. An easy way to connect with your own work at this point, will be to look over your course of study or lesson plans, whether in art or in home economics, on the college or elemental level. Notice whether or not a slant both on the present and on the past is included, and just how this slant approaches the material; by way of the present which is familiar and immediate and to some degree controllable, or by way of the chronological past which is out of immediate experience and over and done with, except as it can be imaginatively or artificially relived.

But there are other and more immediate factors than history which can contribute toward solving the problems hinging around the development of taste. History is only one of the obvious answers to what is, for most of us right now, a riddle since the rapidly changing times have hurled us out of our snug specialization boxes and into the midst of new ways, new environment and new tastes, which are as much Greek to us as if we had not once satisfactorily fulfilled all of the requirements for a diploma or a degree, supposedly guaranteeing our rating as to taste! Much of our own schooling being a training in skills and techniques and ready-made appreciations was out-worn and superseded before we had a chance to use it. Or if we were, fortunately for us, able to slip comfortably along for a brief while, teaching as we were taught—one day we found ourselves slipped out into the middle of the great open spaces where old paths were unprotected and new ways had to be found. As experts, we gasped! The challenge was to adjustment, investigation, and experimentation and we had mostly learned to follow passively and to do unto others as we had been done by. Courses of study in the special subjects became targets at which iconoclastic leading educators aimed. The adult layman suddenly be-

trayed a devastating memory of the "art" of his schooldays and he called it a fad and a frill. The specialist's time was cut; budgets were cut; teaching forces were cut. As experts, we gasped again.

Suddenly adult education became the vogue. The previous flattering delusion that children were the only ones needing education and that the process of growing up in some way implied an intellectual superiority, was mostly unfortunate for everyone concerned. It often reduced the work in the schools to a dreary and dull pouring-out-and-in process which brought little satisfaction when it was accomplished. All at once, helter-skelter, from east and west and north and south, teachers fled back to training schools and colleges to acquire the magical something which would integrate their work and make of them the well-rounded individuals that the new demands craved. And as teachers learned to learn, some of them learned new things about children's learning, and these new meanings began to bring new interpretations to old educational problems. But some of them only acquired the new educational jargon without assimilating the facts which were set before them. This was unfortunate, for the new ideas were too new to be taken as final. This phase of the change, for the special subjects has been all for the better for art or home economics work which ignores the child and makes the teacher the dictator of a mass group, defies the underlying meaning of such useful and practical subjects and makes them "extras" when they would, if taken naturally, be integral parts of the school curriculum.

Even at this early stage in our consciousness of our changing environment, there are developing many new sources of aid to guide us in these new ways, but they are only aids and can almost never be safely taken as authoritatively final, which surely for us as teachers, makes possible more healthful exercise if not as much comfortable ease as the old well-marked way.

One fundamental source of aid which has not yet contributed very largely, but is now becoming more and more meaningful for us, is the comparatively new science of "*Psychology*." In the fairly recent past the prevailing psychology in our own country has become so absorbed in analytical phases that it has sometimes lost the sense of the whole, which is so important a drive toward creative expression. It has perhaps gone too far for us in the analytical and quantitative studies which have produced tests and measurements, and not far enough in the experimental and qualitative studies which would guide the test and measurement devices toward interpretation of real art quality and ability, in so far as either can be made objective. Again time is too brief to do more than suggest the unknown horizons beyond, but if you are interested, go into the library and look over as many of the contributions which psychology has made in terms of art as you can find. You will be amazed to learn how little art educators

have done in this connection and how little of what we usually call "art quality" is involved in the results of the procedures developed by psychologists unaided. Surely we, as specialists, have been lax in tying up with the research in this field. There is material for a whole regiment of art P. H. D's from those who are educatively rather than creatively inclined.

In case at this point in your hunting out of psychological contributions in the art field, you feel inclined to build up some more background, re-read John Dewey on "Drawing, Imagination and Expression," and compare it with Thorndyke's "Education for Imitation and Originality." Then read Dewey's two articles, "Experience, Nature, and Art," and "Individuality and Experience," in the new book compiled by the Barnes Foundation. Then if you feel like acquiring a still broader outlook, and if you haven't read widely along this line read chapter 7 on "The Psychology of the Artist" in Dr. Beatrice Hinckle's book called "Re-Creating the Individual," or chapter 8 on "Training the Creative Mind," in Harry Overstreet's "Influencing Human Behavior," also look into chapter 7 in Dr. Leta Stetter Hollingsworth's contribution on "Special Abilities and Defects." Follow these with some recent general psychological writings of the German School of Experimental Psychology—Koffka's "The Growth of the Mind," or Kohler's "Gestalt Psychology." Then balance yourself again by reading such philosophic writings as Wallas' "The Art of Thinking," or Martin's "The Meaning of a Liberal Education," or Follett's "Creative Experience." There are now so many books available, since almost everyone has learned to read, that one can only recommend from his own contacts. I do not guarantee that you will like these choices, but I do think that they will prove stimulating to the reflecting mood in which one tries to interpret in one's own work, what one has found of interest while reading.

Another source of aid which has not contributed as largely as it will eventually, and which has been prone to lose itself in a haze of disagreement among its foremost exponents, is "Aesthetics." Aesthetic responses are so fundamental, even if they have been temporarily overlooked, that many are beginning once more to believe them to be the normal reactions of young children—see Harriet Johnson's book on "The Nursery School"—and yet one can scarcely find a single basic or elective course in aesthetics in art departments planned for teacher training. Does this mean that art educators do not think that appreciations are as much aesthetic as factual? I have recently been involved in an art curriculum revision for teacher training, and during a survey made of other art courses I was surprised to find invariably listed as "Art Appreciation," courses whose description included only chronological art. Surely we do not think history the only real basis of art appreciation. Perhaps the philosophy of aesthetics will soon develop

into a study for serious art students as well as a pastime for dilettantes. The pre-school investigations of the unforced creative responses of very young children, whether in art or literary forms, have indicated quite clearly that we have been lax in omitting a careful study of aesthetic principles from the education of art teachers.

Another important source of the help which makes for progress is the *Experimental or Progressive School* throughout this country and in Europe. Already, whether we realize it or not, we are being greatly affected by the exhaustive experiments and the findings of these groups. The experimental schools may never contribute much to us from the angle of administration, but they surely, with their exceptional teaching corps and teaching conditions, unlimited funds for research and painstaking study of children, and of ways and means for obtaining most meaningful results, will contribute largely albeit indirectly and despite our unconsciousness of their worth to us. Undoubtedly, a long while will pass before education en masse can learn to apply the methods found most worthwhile by experimental education—yet no one knows how long it will be, so it behooves us, if we are interested in keeping up with progress, to be alert to these progressive happenings, and to translate their experimental findings into action in terms of our own situations. If you have not already done so, do not let much more time slip by without visiting some experimental schools where real curriculum building is in progress. Such schools are rapidly springing up all over the country and naturally very widely from each other and from your own more or less traditional standards—for each one is a unit sufficient unto itself, and handicapped or made successful by the personalities within it.

And when you do go to visit, try not to go in a negatively comparative, protectively-colored mood. While we are thinking negatively we are using the same machinery which might be working affirmatively, actually, and positively for our own development. Recently I went visiting at the City and Country Day School in New York with several art supervisors who spent the whole forenoon making mental notes and comments on what they did better in technique! It surely is not that sort of obvious, simple technique which experimental education is driving after! If it were, there would not be any experimenting. Go looking for whys and if you note a difference from your own practice, try not to overlook it with a negative, albeit flattering to yourself comparison. These experimental educators have done a lot of thinking. They have had to, when they broke away from the status quo and decided to work in new grounds, so you can safely assure yourself that they are doing what they are doing for what seems to them logical reasons. And logical reasons, as we all know, have a way of coming out logically in the end. So when you observe what may

seem to you unguided or unfocused activity—observe some more and longer and deeper before you decide just what it is worth.

At the same time read any issue of the *Progressive Education Magazine*, but particularly the 1926 number called "Creative Expression Through Art." Once more look through Hughes Mearns' "Creative Youth," which he wrote after working with children at Lincoln school. His experiences were with pottery, but they were really creative, so that they are equally applicable to other art experiences. Read carefully, Rugg and Shumaker's new analytical study called "The Child Centered School," for it alone contains enough data to make you cognizant of the scope and value of the progressive movement in education as it is interpreted in the experimental schools.

Another source of more specific, if not reliable, aid are the reorganized and revised curricula and courses of study which are being worked out in large public school systems, because of experimental need and the forward-looking view of a progressive school superintendent and administrative force. Some of these differ very little from the best of the traditional, but already a few outstanding contributions to the integrated activity program are in tentative form. Miss Mabel Arbuckle, supervisor of art for Detroit's elementary schools, has developed such an integrated plan which is known in Detroit as "General Arts." It offers unlimited help in adjusting a similar curricular need in as large or in a smaller system. Similar needs have been felt and met in the revised courses from the public schools in Denver, Colorado; Baltimore, Maryland; Los Angeles, California; St. Louis, Missouri, and in a more traditional though indicative way in the state art courses recently developed in Vermont and Missouri. This is not a complete list by any means. It only covers the few outstanding courses which have come to my attention. My advice at this point is to make your own survey of the accomplishment in the field and to outgrow my brief one, if you have not already done so. Another word of advice is to linger longest over the course which is seemingly most radical, i. e., varies most from traditional formulas.

Another source of the aid which makes for progress is "*Contemporary Art*" in its many forms. It is coming more and more to reveal the taste of specialists and to reflect the varying aesthetic appreciations of countries in all parts of the world. Contemporary decorative or minor arts—textiles, wall papers, ceramics, furniture, etc., may be studied in any large department store, in the magazines devoted to such subjects, and even more comprehensively in such exhibits as those sponsored recently by the Swedish government, the American Federation of Art and various large stores. A blind man could feel the difference in these minor arts for designers are making simpler surfaces, plainer forms and smoother planes, edges rounded in more subtle ways and textures as fine as the material and the use implies. We

are just emerging from a visual era which could live contentedly with over-decorated, over-carved, over-polished, over-stuffed surfaces because it had grown to like that sort of "looks" and was interested only in the superficial appearance of things. We are now beginning to take a renewed interest in tactile values, the "feel of things." The new interest has changed and, at the same time that it has broadened our use of our senses, it has simplified visual effects. Perhaps it is all due, as we sometimes think, to the noise and confusion of our city lives! We crave effects of straight, smooth, structurally significant lines in our *automobiles*, our *architecture*, our *clothing*, our *furniture*, and greater simplification in all of our accessories. Are we realizing how our taste in all these things is changing? And are we including these changes in the design which we are teaching to the children, who are going to make choices from just such things?

The same inevitable and indicative change is evident in *modern painting*, most of which is in actuality old enough already to be listed in the past—the real innovators having long been immortals! Their contributions are already known—individualism in art expression, rather than the sort of coercive control that lingered as long as artists were financed by kings or potentates; form and the third dimension as it relates to reality and its expression through design; color as directly interpretive of form and not as decoration applied to an already worked out surface; subject matter as subordinate to aesthetic response, and not as an end in itself and as the reason for painting; technique as growing out of the need for expression and the implications of the subject, rather than out of a surety of its necessity as settled and disciplinary. These are some of the goals toward which modern painting has been struggling.

Are we including these more vital meanings in our study of the visual arts or whatever you may call them—picture study, art appreciation, or art history? And have we really connected the ideals underlying modern painting with the work of the children whom we teach?

Another source which may contribute toward progress in taste is *leisure!*" We have it. We use it. Do we include a provision for it and its use in our school art activities—are we producing not only appreciations (which may or may not be active) and useful, but also active hobbies? Creative experiences on the part of children, necessitate teachers who have expressed themselves not only in words, but in the actual materials of art expression. Are we providing for such experiences both for children and for teachers who will work with children?

A remark by an old Williams College professor of philosophy has always stayed in the background of my mind because it summarizes an attitude so vividly—"If you are turning a grindstone, every moment is precious, but if you are doing real work, the inspired moments are precious."

BIBLIOGRAPHY

The following list is neither exhaustive nor even partially complete. It merely represents some of the readings which I have found of interest in interpreting the problems of "Our Times," and their relation to art curricula and teaching. The starred references, seem to me a little more important. The Industrial Arts Cooperative Service at 519 West 121st street, New York city, will secure any of the books or pamphlets for you at cost.

I. Psychological, Philosophic, and Aesthetic Background.

Read particularly the parts dealing with such subjects as creative experience, emotion, and behavior.

- | | |
|---------------|--|
| +Dewey | Drawing, Imagination, and Expression; the whole pamphlet;
How We Think; Chapt. XII, XVI.
Interest and Effort; Chapt. IV
Experience and Nature; Section 1, and Individuality and (in Art and Education, The Barnes Foundation) Experience; Section 2 |
| *Thorndike | Education for Initiative and Originality; the whole pamphlet |
| Judd | Psychology of the Fine Arts; (1925 February, Elementary School Journal) |
| *Hinkle | Re-Creating the Individual; Chapt. VII |
| Overstreet | Influencing Human Behavior; Chapt. VIII |
| Goodenough | Measurement of Intelligence by Drawing; at least the introduction |
| *Kofka | The Growth of the Mind; as much as interests you |
| Kohler | Gestalt Psychology; a chapter or two, at least |
| Hollingsworth | Special Abilities and Defects; Chapt. VII |
| Martin | The Meaning of a Liberal Education; Chapt. IV, VII, IX |
| Alvord | Changing Fashions in History; P. 124 (Essays on Today, 1926-1927) |
| Wallas | The Art of Thinking |
| *Follett | Creative Experience |
| Russell | Education and the Good Life |
| *Burhmeyer | The Aesthetic Experience |
| Prall | Aesthetic Judgment; Chapt. I, II, XVI |

III. Contemporary Art Trends

- | | |
|---------|---|
| Parke | New Backgrounds for a New Age;
browse through it |
| Frankl | New Dimensions; Chapt. I, IX, X, or
maybe a book of the illustrations will
suffice |
| Calkins | Beauty, the New Business Tool (At-
lantic Monthly, August, 1927, Cata-
logues of the American Designers' Asso-
ciation Exhibits, 57th St. New York
city |

Creative Art and Magazine; any recent issues

The Arts Magazine; any recent issues

- | | |
|--------------|--|
| Wright | In the Cause of Architecture (a series in
the Architectural Record, 1928) |
| Le Corbusier | Towards a New Architecture |
| Wettergren | Modern Decorative Arts of Sweden |
| Weyhe | Decorative Art, 1928; including data on
furniture, ceramics, textiles, etc. |

Portfolios of colored reproductions of textiles, iron work sculp-
ture, etc., from the Paris Exposition of Decorative Arts, 1925.

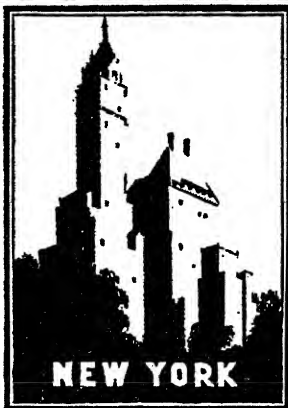
- | | |
|------------|--|
| Glass Gold | The Modern Note in the Decorative
Arts (Part I, II. The Arts Magazine,
1928) |
| Read | Twentieth Century Decoration; July,
1928 Vogue |

IV. General Background

- | | |
|-----------|-------------------------------|
| Whitehead | Science and the Modern World |
| Randall | The Making of the Modern Mind |
| Brown | The Creative Spirit |
| Sullivan | Autobiography of an Idea |
| Haraps | The Education of the Consumer |

Reports of the Federated Council on Art Education

- Report on Elementary School Art Edu-
cation.
- Report on Colleges, etc.
- Report on Art Museums



To fill every need-
from the primary
grades - through
the high school
use
GOLD MEDAL
products.



CRAYOLA Wax Crayon —
the best medium for
kindergarten and
primary grades.

PERMA Dressed Crayon —
for fine lines and vel-
vety tonal textures.

ARTISTA Water Colors: clean,
true colors, which
mix easily.

ARTISTA Tempera Show
Card Colors: creamy
poster paint.

Binney & Smith Co.

41 East 42nd Street

New York.

Dinner and Dance

"A Night in Paris" was the title given to the annual dinner and dance this year. No one could believe that the ballroom in which the afternoon session was held could be so completely transformed in order that all of the atmosphere of a French village might surround the place. One entire wall of the banquet hall was hidden by scenery painted by art school students. It produced the delusion of looking down two narrow streets between rows of houses of typical French architecture. Black scarfs and turbans made by the local committee for the guests to wear as they surrounded the tables, completed the picture.

During the meal a splendid musical program was offered by one of the high school musical organizations. This was followed by an elaborate program of music, dancing and vaudeville which was presented through the co-operation of the crew of the "Ship" (material and equipment firms).

After the dinner, as if a hurricane had struck the room, the tables were cleared and removed and the floor made ready for dancing. As the morning hours approached and the last number was rendered by the orchestra, the weary but delighted group pronounced the evening a most happy occasion.

Our Advertisers

This bulletin brings to you the addresses given at the general sessions and section meetings. It also carries a few pages of important information from firms who have something of special interest to our membership. Patronize them, for advertisements are accepted only from firms of established reputation.

A successful year financially for the Western Arts Association has been made possible in part by the co-operation of the firms which have taken advertising space in our bulletins. The firms which have taken advantage of one or more issues of our bulletins are:

American Crayon Company
 Berkshire Summer School of Art
 Binney & Smith Company
 A. K. Cross
 Devoe & Raynolds
 Eberhard Faber Pencil Company
 Esterbrook Steel Pen Company
 Joseph Dickson Crucible Company
 Metal Crafts Supply Company

New York School of Fine and Applied Art
 Pelican Works
 Practical Drawing Company
 School Arts Magazine
 Specialists Educational Bureau
 University of Iowa
 University Prints
 Ward Belmont School of Art

Exhibits

Unfortunately, exhibit space for material and equipment firms was very limited, but the "Ship's" crew was on deck with a friendly welcome for everybody. Many new and interesting things were on display and all who reserved ample time to inspect the materials and equipment were well repaid for their efforts. The following firms were represented:

P. P. Caproni and Brother	The Specialists' Educational
Brown Robertson Company	Bureau
The Prang Company	The Stanley Tool and Level
Jos. Dixon Crucible Company	Company
Henry Disston and Sons	The Art Extension Press
Binney & Smith	Mrs. L. A. Bennett
The Manual Arts Press	F. Weber Company
University Prints	Devoe Raynolds Company
The Milton Bradley Company	E. T. Shima
The Dudley Lock Corporation	The De Vilbiss Company
The Favor Ruhl Company	The Practical Drawing Company
F. A. Owen Publishing Company	The Eberhard Faber Pencil
The Esterbrook Pen Company	Company
The Frederick Post Company	The School Arts Magazine
The Reynolds Metal Company	The American Crayon Company
The Mentzer Bush Company	

Following the custom of the past few years, a number of firms donated prizes which someone visiting their booth was lucky enough to receive, provided he was present at the drawing held during the last business session. These fortunate persons were:

Mildred E. Johnson, Youngs-	Mrs. Lucy Runnels, Fort Worth,
town, Ohio	Texas
Marion L. Creaser, Grand Rap-	Miss Eva Lewton, Cleveland,
ids, Michigan	Ohio
Janet C. Adams of Sheperd,	L. C. Rose *
Michigan	Ruth Raymond, Minneapolis,
W. B. Johnson, Indianapolis,	Minnesota
Indiana	Edith Jordan Hall, Highland
Grace Wills, Muncie, Indiana	Park, Illinois
D. R. Winegarden, Indianapolis,	Pearl Wenrich, Ann Arbor,
Indiana	Michigan
Jeanette Bjornstad of Wisconsin	Clara Gottschalk, Columbus,
Mildred Pickett, River Rouge,	Ohio
Michigan	J. Lyle Johnson, Indianapolis,
G. H. Nichols, Richmond,	Indiana
Indiana	Lillian C. Allison, Waterloo,
Eleanor King, Forest, Illinois	Illinois

Gertrude Cocher, Toledo, Ohio
 Emma W. Jackson, Highland,
 Michigan
 M. Bertha Howard, Flint,
 Michigan
 Ray Rayford, Muskogee,
 Oklahoma
 Miss E. Cames, Cleveland, Ohio
 Jennie Robertson, Wichita Falls,
 Texas

A. J. Spangler, Kent, Ohio
 Sister Magdalena
 Emma Lou Rea, Dearborn,
 Michigan
 Laura Belleville, Norwood, Ohio
 G. H. Targett, St. Louis,
 Missouri

Reports

According to the constitution and by-laws, President Scovel called the first general meeting into business session for the transaction of the following business:

Appointment of Committee on Resolutions. Miss Myrtle M. Irons, Rockford, Illinois; Mrs. G. H. Hargrave, St. Louis, Missouri, and Miss Marian Bright of East Cleveland, were named as members of this committee.

Election of Nominating Committee. The following six persons were nominated from the floor to serve upon this committee: Wm. H. Vogel, Elmer W. Christy, Ruth Raymond, L. R. Abbott, Mary Moore and Belle Scofield. Ballots were cast for three, and the tellers, Messrs. Martin, Hamburger and Porter, reported the election of Miss Scofield, Mr. Vogel and Mr. Abbott.

On Friday afternoon, after calling the meeting to order, the president announced that she had a little treat in reserve for this meeting and presented Leora Doris Wood, five-year old daughter of Secretary Harry E. Wood, and a pupil of Mrs. W. B. Gates of Indianapolis, who rendered a "Baby Ballet" in a very charming manner.

Mr. John Fintz, chairman of the Cleveland committee in charge of material and equipment exhibits, and Mr. Briggs, general chairman, conducted a drawing and presented those listed elsewhere in this bulletin with the prizes donated by the exhibitors.

Following this distribution President Scovel called the convention into business session.

Secretary Wood gave a brief verbal report of the activities of the Association, explaining that the complete secretary's report would be presented in the bulletin carrying the proceedings of the meeting.

Mr. Wood reported for the Editorial Board, explaining that the appointment of such a board had not been made during the past two years because it could not longer function in connection with present methods of publishing the bulletins and editing the proceedings. He explained that a revision of the constitution and by-laws whereby it would be possible for an Editorial Board to function was discussed

in council meeting and that such a proposed revision in the constitution and by-laws would be presented to the membership through the February bulletin.

Mr. Vogel, chairman, gave the following verbal report for the Council:

"I want to congratulate the association on the fine body of people who constitute the council this year. They have been faithful and they have been on the job at 7 o'clock in the morning. They have missed many of the joys and pleasures of the program and the exhibits in their faithful response to their responsibilities. They have attended to every detail of the business, and have decided to take the convention to Minneapolis next year. Again, I congratulate you on the fine body of people you have in the Council outside of myself."

"The next in the order of business was the reports of special committees. One of the special committees is that of the Federated Council on Art Education. Miss Scovel, as chairman of the committee, reported. "If you will turn to your last year's proceedings and to page 77, you will find a very complete report of this Federated Council, its objects, aims and its work. This year no meeting of this Federated Council has been called, as there is not very much money in the treasury and that money is to be used for the printing of a report on terminology by Professor William Whitford of Chicago University, a very worthwhile report. That is why I cannot give you anything more about the Federated Council."

Mr. Vogel presented the following report for the nominating committee.

For president, J. H. McCloskey. For vice-president, Miss Myrtle Irons. For auditor, Miss Effie Schuneman. For member of the Council, Miss Mary C. Scovel.

A motion duly seconded and passed was made by George Dutch that the secretary be instructed to cast the ballot for the officers as nominated. This the secretary did and the president declared the unanimous election of Mr. McClosky, Miss Irons, Miss Schuneman and Miss Scovel.

Mr. Hargrave reported as follows for the committee on resolutions:

WHEREAS, the Thirty-fifth Annual Convention of the Western Arts Association has been one of the most outstanding in the history of the organization, and

WHEREAS, its success has been largely due to the efficient and wholehearted support of the cities of Cleveland and greater Cleveland, and

WHEREAS, the hearty co-operation of the various institutions and organizations have added materially to its success,

BE IT RESOLVED that the sincere thanks of the Association be extended to the boards of Education of Cleveland and greater Cleveland for their material assistance in arranging exhibits and providing entertainment at various points of interest in and about the city;

To the superintendent of schools and his entire corps of assistants for their co-operation;

To the Art Museum, Cleveland School of Art, the Women's City Club, Nela Park, and the Playhouse for all courtesies extended;

To the officers of the Association and their several committees for their untiring efforts for the association and to their several committees for their untiring efforts in the preparing and carrying on of this excellent program;

BE IT RESOLVED that the thanks of the Association be extended to the various speakers who have given so liberally of their efforts and time;

To "The Ship" and its entire crew for their substantial support in connection with the general welfare of the Association.

WHEREAS, the Western Arts Association has lost one of its members during the past year in the death of Miss May E. Robinson of Washington, Indiana,

BE IT RESOLVED that this organization go on record as expressing a deep regret in the loss of this educator who has contributed so much in bringing about a realization of art values to the public in general.

On motion of Mr. Vogel, which was duly seconded, the resolutions were adopted and ordered placed in the Association records.

Mr. McCloskey, president-elect, was called to the platform and expressed his appreciation of the honor tendered him.

Several members of the Association residing in or near Minneapolis expressed their appreciation of the fact that the Council had consented to take the convention to Minneapolis next year, and promised their hearty co-operation in making the meeting a success.

Adjournment.

Report of the Secretary

Your secretary wishes to report that the change in the method of recording memberships has proven of such value that he recommends the continuation of the system. The cumulative record card has reduced the chance for error to a minimum and makes possible a correction when an error is found. The chief difficulty in keeping membership records correctly is due to the failure on the part of

members to notify the secretary of change of address. Failure in this respect has cost the Association approximately \$16 for bulletins returned because of incorrect address and many members have not received their bulletins.

Minutes of all council meetings have been forwarded to council members for correction and approval and the corrected minutes are being filed in the secretary's minute book.

The president appointed the secretary to act as chairman of the Editorial Board and as such he has prepared all bulletins for publication and he has partially financed the printing bills through advertising space sold.

The following budget for the year 1929-1930 was proposed and approved by the Council.

HARRY E. WOOD,
Secretary Treasurer.

Budget

	1928-1929	1929-1930
<i>Estimated Receipts</i>		
Membership	\$2,000.00	\$2,000.00
Advertising	1,500.00	1,500.00
Sale of Reports.....	60.00	40.00
Commercial Exhibits	2,200.00	2,200.00
Interest	10.00	60.00
Miscellaneous		
	<hr/>	<hr/>
	\$5,770.00	\$5,800.00

Estimated Expenditures

Program	\$1,200.00	\$1 200.00
Secretary's Office	600.00	500.00
President's Office	100.00	100.00
Editorial Board	200.00	200.00
Exhibit Committee	500.00	100.00
Publications	2,500.00	2,450.00
Membership Promotion		150.00
Miscellaneous	150.00	150.00
Secretary's Salary	500.00	500.00
Convention		450.00
Badges	20.00
	<hr/>	<hr/>
Total	\$5,770.00	\$5,800.00

Treasurer's Report for the Fiscal Year

September 1, 1928 to September 1, 1929

DISBURSEMENTS

Program	\$ 779.76
Secretary's Office	377.42
President's Office	52.35
Editorial Board	196.47
Exhibit Committee	167.70
Publications	1,452.56
Membership Promotion	99.89
Advertising	19.85
Miscellaneous	90.50
Convention	522.08
Secretary's Salary	500.00
<hr/>	
Total Disbursements	\$4,258.22
Balance in bank September 1, 1929.....	1,667.42
Funds at Interest September 1, 1929.....	1,500.00
<hr/>	
Total	\$7,425.64

RECEIPTS

842 Members—Dues	\$ 842.00
Bulletin Subscription	842.00
60 Student Members.....	60.00
Advertising	796.50
Sale of Year Books.....	21.25
Sale of Membership Lists.....	5.00
Material and Equipment Exhibits.....	1,486.08
Miscellaneous	129.36
<hr/>	
Total receipts	\$4 182.19
Balance in bank September 1, 1928.....	1,743.45
Funds at Interest September 1, 1928.....	1,500.00
<hr/>	
	\$7,425.64
<hr/>	
Total assets September 1, 1929.....	\$3,167.42

Report of Auditor

I wish to state that I have checked over all vouchers, bills, etc., with the assistance of an experienced accountant and find the same very concise and correct. The accounts of the Western Arts Association, I think, have been competently handled.

Yours very truly,

RUTH M. BLANKMEYER.

UNIVERSAL
LIBRARY



140 285

UNIVERSAL
LIBRARY